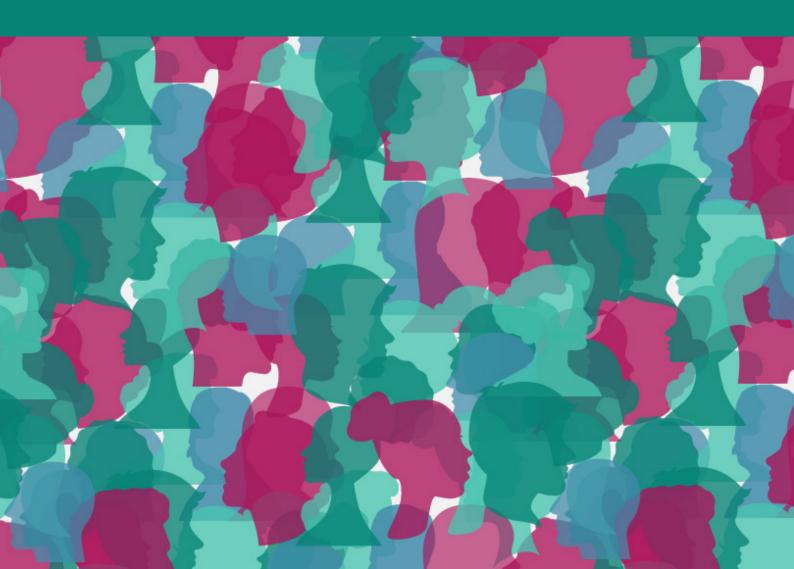


Advancing the Surgical Workforce: 2023 UK Surgical Workforce Census Report



ADVANCING THE SURGICAL WORKFORCE: 2023 UK SURGICAL WORKFORCE CENSUS REPORT

©2024 The Royal College of Surgeons of England. All rights reserved.

Published by the Royal College of Surgeons of England, Registered Charity no. 212808

The Royal College of Surgeons of England 38–43 Lincoln's Inn Fields London WC2A 3PE

www.rcseng.ac.uk

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the Royal College of Surgeons of England.

While every effort has been made to ensure the accuracy of the information contained in this publication, no guarantee can be given that all errors and omissions have been excluded. No responsibility for loss occasioned to any person acting or refraining from action as a result of the material in this publication can be accepted by the Royal College of Surgeons of England or the contributors.

Contents

List of abbreviations	4
Foreword	5
Executive summary	6
Introduction	9
Recommendations	10
Key findings	11
Issue 1: Productivity	19
Issue 2: Sustainable workforce	25
Issue 3: Working conditions – systems and processes	33
Conclusions	35
Appendix 1: Methodology	37
Appendix 2: Limitations	38
Appendix 3: Acknowledgements	39
Appendix 4: Contributors	40
Appendix 5: Surgical specialties	41
Appendix 6: Surgeons in training	81
Appendix 7: SAS surgeons and LEDs	86
Appendix 8: Additional demographic information	92
References	96

List of abbreviations

CCT – Certificate of Completion of Training

ENT – ear, nose and throat

EPR – electronic patient record

EST – extended surgical team

GMC - General Medical Council

LED – locally employed doctor

LTFT - less than full time

NHS - National Health Service

OMFS – oral and maxillofacial surgery

PA – programmed activity

SAS – specialty and associate specialist

SPA – supporting professional activity

Foreword

I am pleased to present *Advancing the Surgical Workforce*, the 2023 UK Surgical Workforce Census Report of the Royal College of Surgeons of England.

It has been over ten years since the Royal College of Surgeons of England, in collaboration with the surgical specialty associations, published two workforce reports that looked at the challenges facing consultants across England, Wales and Northern Ireland. 1,2 Although there have been extensive changes in the NHS, many of the same challenges remain. The largest of these is elective care, particularly in surgical waiting lists and waiting times for outpatient appointments. The severity of the COVID-19 pandemic created significant additional adverse effects on waiting lists, surgical training and the wellbeing of surgical staff. These factors have greatly reduced the morale of all members of the surgical team and, taken together with other aggravating factors, this has affected productivity.

It is important to reflect on the considerable developments that have been made over the past ten years. There has been an overall change in the make-up of the surgical workforce and how the surgical team works together. Consultants and surgeons in training have had to embrace different ways of working and training with substantial advances in technology. There has been a large expansion among SAS doctors, who continue to provide high-quality services both in elective surgery and in the emergency setting. In addition, there have been steady increases in the roles of the EST, complementing their medically qualified colleagues. It is in this context that the census has included all members of the surgical team.

The census was initiated and conducted during the development of the NHS long-term workforce plan.³ The plan sets out the NHS' workforce demand and supply requirements over the next 15 years as well as the actions required to address support and grow the workforce accordingly. It remains to be seen how the implementation of the plan will affect members of the surgical team. We acknowledge that the devolved nations have developed their own workforce plans in response to local staffing challenges.^{4–6}

Thank you to the 6,348 consultants, surgeons in training, SAS surgeons, LEDs and members of the EST who responded to the census from across the UK. I hope that this report reflects the current state of surgery in the UK, and that the recommendations provide a basis for future comparative work to support the working lives of surgeons and the surgical team.

Mr Tim Mitchell
President
Royal College of Surgeons of England



Executive summary

The 2023 UK Surgical Workforce Census was designed to survey the whole surgical workforce to inform workforce planning and to identify the key challenges facing the surgical team.

The aim of the census is to provide up-to-date data regarding the surgical workforce and the issues that affect it, across all four nations of the UK and all surgical specialties, including all grades of the workforce (consultants, surgeons in training, SAS surgeons, LEDs and members of the EST). The census was undertaken by the Royal College of Surgeons of England with support from the Royal College of Surgeons of Edinburgh, the Royal College of Physicians and Surgeons of Glasgow, and the Federation of the Surgical Specialty Associations.

The census comprised a questionnaire covering three domains:

- 1. Demographics
- 2. Job plans and surgical activity
- 3. Job satisfaction and wellbeing linked to working conditions

The questionnaire included binary answers, drop-down boxes and free text. It has been analysed by the Business Intelligence Unit at the Royal College of Surgeons of England using Microsoft Power BI.

We received 6,348 replies. Of these, 3,420 (54%) were from consultants, 1,595 (25%) from surgeons in training, 608 (10%) from SAS surgeons, 342 (5%) from LEDs and 383 (6%) from members of the EST.

There were twice as many male respondents as female respondents (67% vs 33%). Other genders represented fewer than 1% of the responses. For consultants, the proportions were 75% male and 25% female whereas for surgeons in training, they were 58% male and 42% female. The majority of consultant respondents were aged 45–54 years (41%) or 55–64 years (30%). Of the remaining consultants,

<1% were aged 25–34 years, 23% were aged 35–44 years, 5% were aged 65–74 years and <1% were aged over 75 years. Of those respondents who were surgeons in training, 64% were aged 25–34 years and 34% were aged 35–44 years. Overall, 59% of respondents were from a White ethnic background (67% of consultants, 55% of surgeons in training).

The questions on working activity gathered information on working hours as well as specific clinical commitments. The majority (89%) of respondents work full time while 11% work LTFT. Specific contractual commitments within job plans show that 81% of consultants and 68% of SAS surgeons work more than 10 PAs per week. Threequarters of consultants and SAS surgeons (77% and 74% respectively) have an oncall commitment. Among these, 45% of consultants and 53% of SAS surgeons work 1:5 to 1:8 rotas but over 30% in each group undertake 1:9 to 1:12 commitments. A third (31%) of consultants always work beyond their contractual obligations. Two-thirds (67%) of consultants frequently or always work beyond their contractual obligations.

Burnout and stress was perceived to be the main challenge in surgery by 61% of respondents; this was followed by access to the operating theatre, reported by 56% of respondents. The reasons for both were multifactorial, reflecting working conditions reducing overall morale and changes in practice preventing surgeons from being able to operate. Access to theatre was cited by 61% of surgical trainees as a particular challenge that adversely affected their training. Furthermore, the pressures of service provision prevent them from attending training sessions both in the clinical environment and in educational settings; as a result, without dedicated time for training and dedicated trainers, many are considering their career options particularly in the core training years.

SAS surgeons and LEDs reported that they do not feel part of the team, and yet they are expected to provide a large volume of service. They also noted significant difficulties with education and training opportunities.

The findings from the census demonstrate that there are issues with productivity and sustainability of the surgical workforce, and there is a need to change ways of working. Solutions to these challenges include determining the differing roles undertaken by different members of the surgical team. The recommendations represent a package of measures that are interdependent.

The combination of the complexity of patients and their presentations, coupled with the rising demand for surgery and patient expectations, has contributed to the workload being unsustainable for the current surgical workforce. There is an urgency to increase consultant numbers, and to ensure that the current consultant workforce is retained and able to meet increasing demands. Increased access to existing theatre spaces alongside an expansion of surgical hubs will maximise the impact of any expansion in the surgical workforce.

The current model of job plans should be reviewed to take account of the way in which surgical care is provided. This should include an approach to career phasing, where surgeons have differing work patterns across their careers, and greater flexibility, which the current fixed session contracts do not allow. Service needs are different across specialties and these should be borne in mind when developing the workforce to meet these requirements.

Training for all members of the surgical team must be provided by trainers with dedicated time for training. The governmental workforce plans need to evolve for surgical trainees in the different specialties.

Service pressures affect both clinicians and managers alike. Greater understanding of these pressures is required to ensure optimal working so that a quality service can be provided for patients.



Introduction

The Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, and the Royal College of Physicians and Surgeons of Glasgow have a longstanding commitment to engaging with and informing major stakeholders in workforce planning. Such planning is totally dependent on available data on the composition of the surgical workforce in the UK.

The two previous workforce reports of 2010 and 2011 described the working conditions (both in general and within specialties) of consultant surgeons employed in the NHS in England, Wales and Northern Ireland. The establishment of the Business Intelligence Unit at the Royal College of Surgeons of England has provided the infrastructure to support the census, which was designed to determine the current state of the whole surgical team, its working conditions and the challenges facing all surgical personnel, with the aim of creating the optimal environment to deliver safe surgical services for all patients.

The census included all members of the surgical team: consultants, surgeons in training, SAS surgeons, LEDs and members

of the EST. It sought information from both across the team and specifically within the different professional groups, focusing on the demographic background, job plans and activity, and working conditions and wellbeing of staff.

The current climate is extremely challenging and it is not surprising that many responses are highly critical of working conditions. This report includes many of the themes identified in these criticisms and these have been carefully evaluated to enable identification of potential solutions to the underlying problems. These form the basis of the recommendations.

The recommendations focus on:

- increasing productivity to reduce waiting lists
- · ensuring a sustainable surgical workforce
- changing the way surgeons work

Each of these aims have been carefully constructed with reference to the three principal domains of the data. Each domain is described comprehensively, highlighting specific details of both quantitative and qualitative data. There is considerable overlap across these recommendations.

The findings from the census will influence the Royal College of Surgeons of England's strategies and policies relating to the current and future surgical workforce. The census will also shape discussions with the Department of Health and Social Care, NHS Employers, the NHS England Workforce, Training and Education Directorate, and the equivalent bodies in the devolved nations around supporting service development, training and future investment in surgical services.

Mr William Allum

Council Lead for Workforce and Training Royal College of Surgeons of England

Recommendations

Increase productivity

- Urgently increase operating theatre capacity by ensuring that existing theatre spaces are used to their maximum capacity by:
 - a. reducing the administrative burden on consultants and enabling them to spend more time on clinical activities;
 - b. significantly increasing the number of theatre staff being recruited;
 - c. ensuring sufficient operating theatre estate and infrastructure;
 - d. increasing the number of surgical hubs and ringfencing beds for elective surgery;
 - e. working with the Royal College of Anaesthetists to call for increased investment in the anaesthetic workforce in order to facilitate greater access to theatre.
- Increase the consultant surgeon workforce according to specialty demand year on year by:
 - a. significantly improving retention rates by providing targeted plans for all surgeons considering retirement;
 - b. increasing the year-on-year rate of recruitment to new or replacement posts.
- Facilitate transformation in the outpatient setting with dedicated administration time for new ways of working, including time for triage, advice and guidance.

Ensure a sustainable surgical workforce

4. Work with NHS Trust organisations and Health Boards to develop a national focus on policies and guidance that have a beneficial impact on the wellbeing of surgeons. This should include work around:

- a. bullying and harassment;
- b. sexual misconduct;
- c. flexibility and LTFT working;
- d. improving the working environment, such as providing private places to rest, hot meals, dedicated spaces for personal study and facilities for parents returning to work.
- 5. Increase training numbers across all surgical specialties and prioritise training opportunities for those in designated training programmes to:
 - a. meet future service requirements;
 - b. reflect the demand for flexible working.
- 6. Invest in the wider theatre and EST to undertake specific roles, underpinned by national standards as defined by the surgical royal colleges and surgical specialty associations, so as to support the delivery of surgical services.

Change the way we work

- 7. Work with NHS Trust organisations and Health Boards to develop and implement national job planning guidance to reflect stage of career as well as specialty-specific and emergency/elective variations in practice.
- Ensure that there is contracted and protected time for educational and clinical supervisors to train all members of the surgical team.
- 9. Promote the integration of SAS surgeons and LEDs within the surgical team, and ensure their inclusion in service planning, education and leadership opportunities.

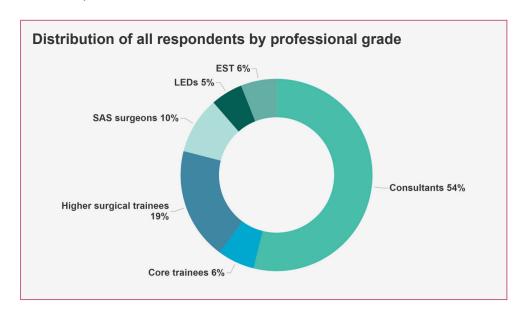
Key findings

There were 6,348 responses from the different members of the surgical team, which represents approximately 25% of the current workforce.

Demographics

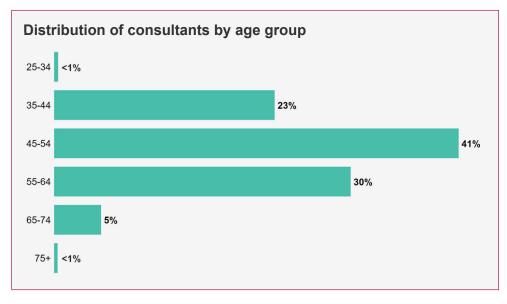
Professional grade

54% of responses were from consultants and 25% were from surgeons in training. 10% of responses were from SAS surgeons and 5% were from LEDs. 6% of responses were from members of the EST.



Consultant age

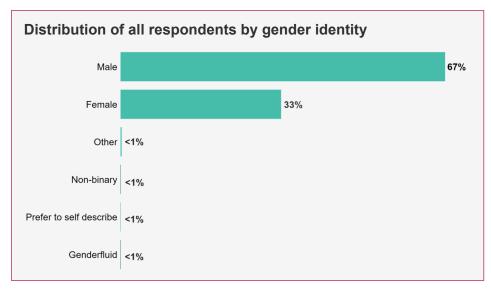
36% of all consultants were aged over 55 years.

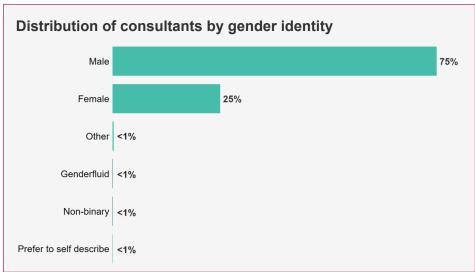


Gender identity

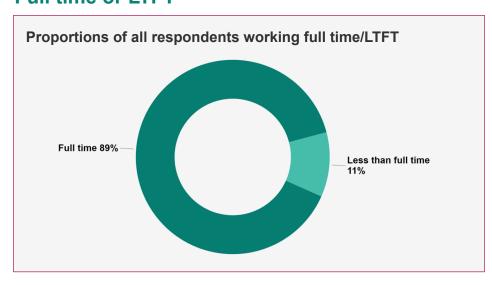
33% of all respondents were female.

25% of all consultants were female.





Full time or LTFT



Proportions of respondents working full time/LTFT by professional grade

Grade	Full time	Less than full time
Consultants	87%	13%
Core trainees	96%	4%
Higher surgical trainees	90%	10%
SAS surgeons	92%	8%
LEDs	95%	5%
EST	89%	11%

Ethnicity

There is a greater proportion of ethnic minority surgeons in the trainee population than in the consultant population.

Proportions of respondents by ethnic group

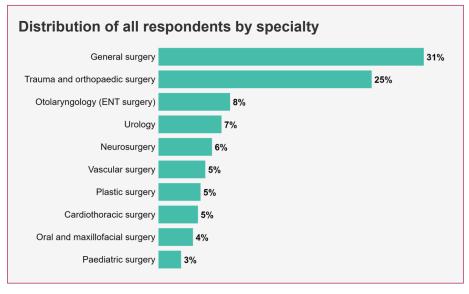
Consultants

Ethnic group	%
Arab	2%
Asian or Asian British - Bangladeshi	1%
Asian or Asian British - Chinese	2%
Asian or Asian British - Indian	15%
Asian or Asian British - Other Asian background	2%
Asian or Asian British - Pakistani	2%
Black or Black British - African	1%
Black or Black British - Caribbean	<1%
Black or Black British - Other Black background	<1%
Mixed - Other mixed background	1%
Mixed - White and Asian	1%
Mixed - White and Black African	<1%
Mixed - White and Black Caribbean	<1%
White - British, English, Welsh, Scottish, Northern Irish	56%
White - Gypsy or Irish Traveller	<1%
White - Irish	3%
White - Other White background	12%
Other	1%

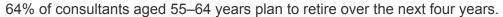
Trainees

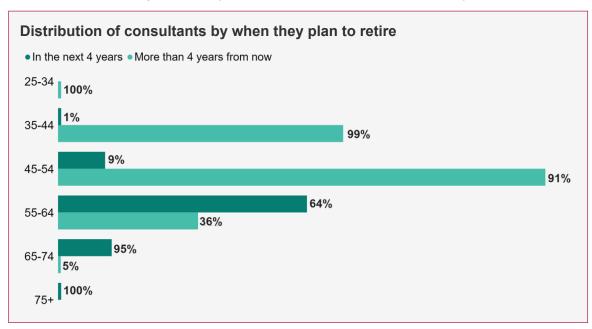
Ethnic group	%
Arab	5%
Asian or Asian British - Bangladeshi	2%
Asian or Asian British - Chinese	5%
Asian or Asian British - Indian	11%
Asian or Asian British - Other Asian background	4%
Asian or Asian British - Pakistani	4%
Black or Black British - African	3%
Black or Black British - Caribbean	<1%
Black or Black British - Other Black background	<1%
Mixed - Other mixed background	1%
Mixed - White and Asian	2%
Mixed - White and Black African	<1%
Mixed - White and Black Caribbean	<1%
White - British, English, Welsh, Scottish, Northern Irish	48%
White - Gypsy or Irish Traveller	0%
White - Irish	2%
White - Other White background	10%
Other	1%

Specialty



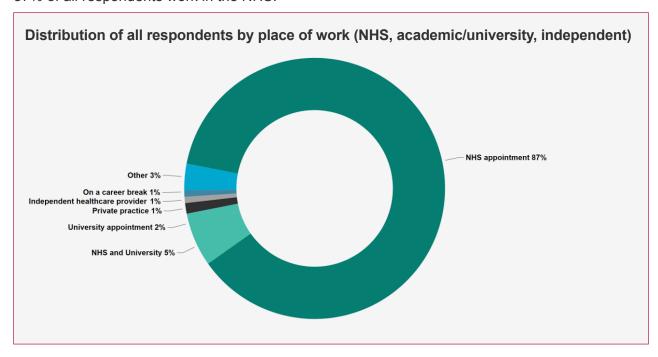
Retirement plans





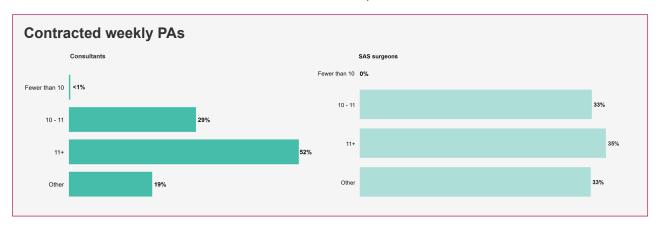
Place of work (NHS, university or independent practice)

87% of all respondents work in the NHS.

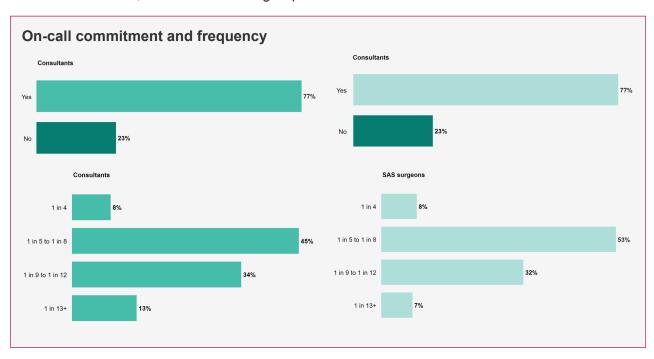


Job plans and activity

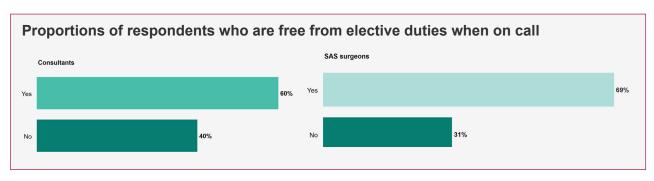
52% of consultants have a contract for 11 PAs or more, which contrasts with 13% in 2011.



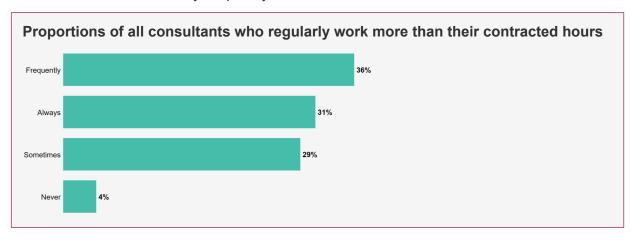
77% of consultants and 74% of SAS surgeons have an on-call commitment, with most working 1:5 to 1:8. However, over 30% in each group undertake a 1:9 to 1:12 on-call commitment.



40% of consultants are required to maintain an elective service while on call.

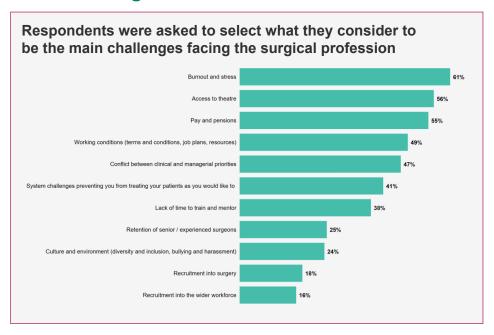


31% of consultants stated that they always work beyond their contractual requirements and a further 36% noted that they frequently do this.

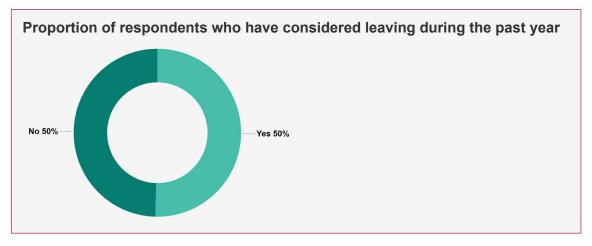


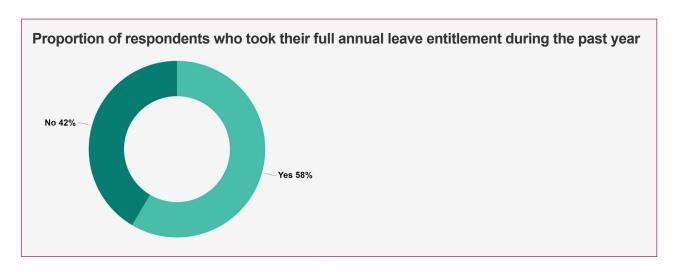
Working conditions and wellbeing

Main challenges



Burnout and stress: This was selected as one of the top current challenges in surgery by a larger proportion (61%) of respondents in this census than any of the other options.





Access to theatre: 56% of respondents felt that limited access to the operating theatre was one of the main challenges facing surgery. In particular, this was noted by 61% of surgeons in training.

Pay and pensions: 55% of respondents cited pay and pensions as a major challenge.

Working conditions: 49% of respondents selected working conditions as an important factor.

Conflicting priorities: 47% of respondents felt that conflicts between clinical and managerial priorities had an impact on their ability to carry out their work.

Lack of time to train: 52% of surgical trainees reported a lack of adequate time for training.

Job plans and resources: 50% of respondents stated that they experienced difficulties with job plans and resources. 60% of consultants and SAS surgeons undertake 1.5 SPAs or fewer per week.



Cultural environment: 24% of respondents cited bullying and harassment as a key issue. This increased to 35% for SAS surgeons and LEDs.



Issue 1: Productivity

Public service healthcare productivity is estimated by comparing growth in the total quantity of healthcare output with growth in the total quantity of inputs used.⁷

Applying this definition to surgery, input is the surgeon, the environment and supporting resources while output is the successful and safe treatment of patients with surgical conditions. The elective patient pathway to a successful output includes referral from primary care, clinical assessment in an outpatient clinic, access to diagnostics, admission for surgery, operation in an operating theatre and appropriate follow-up.

Overall public service healthcare productivity fell by an estimated 25.6% in England in the financial year ending 2021, the largest decline in over two decades.⁷ In surgery, the separation of elective and emergency pathways has affected the provision of elective care because of the emergency on-call commitment. This has been compounded by the absence of surgeons in training after being on call (as per their contractual requirements).

NHS England workforce data for 2022 show that there were 9,724 consultant surgeons, 8,071 SAS surgeons/LEDs and 7,471 surgeons in training.8 Over the past five years, there has been a 3% year-on-year increase in the numbers in these groups. During the

same period, there has been an average annual increase of 3% in the number of operations performed.⁸ Despite this apparent equivalence of surgeon numbers to activity, patients are still waiting an unacceptably long time for elective surgery. The reasons for this are multifactorial.

Outpatient clinics

Access to clinics following primary care referral is dependent on the priority of the clinical condition as well as availability of clinic appointments.

Competition for appointments can be detrimental to less complex presentations. This varies across the specialties with shifts away from operative to medical treatments, notably in ENT surgery and OMFS, where there are increasing demands for outpatient slots. Furthermore, there appears to be less confidence among primary care clinicians to manage certain conditions, resulting in more specialist referrals.

Clinics are staffed by all members of the surgical team and led by a consultant. In addition to the medically qualified workforce, clinic activity is supported by members of the EST, which includes nurse specialists and advanced nurse practitioners. Surgeons in training felt that the impact of other service pressures was preventing them from attending clinics.

Many patients will require some form of imaging as part of their assessment. This can create delays in the patient pathway as demands for imaging services increase. Many will also need endoscopic investigations, which can likewise cause delays. In order to meet growing demands, some specialties have moved certain procedures (such as flexible cystoscopy in urology) to the outpatient department.

Numbers of consultants, SAS surgeons/LEDs and surgeons in training by specialty⁸

Specialty	Consultants	SAS / LEDs	Trainees
Cardiothoracic surgery	439	378	169
General surgery	2,715	2,227	2,995
Neurosurgery	386	346	232
Oral and Maxillofacial surgery	343	923	121
Otolaryngology (ENT surgery)	824	615	672
Paediatric surgery	215	143	127
Plastic Surgery	608	422	395
Trauma & Orthopaedics	2,840	2,239	1,899
Urology	1,062	656	669
Vascular surgery	292	122	192
Total	9,724	8,071	7,471

The available time for appointments in clinics needs to be adjusted to meet the increasing complexity of new referrals. Most consultants are undertaking 2–4 outpatient clinics per week, with variability across the specialties, but consultants still report seeing fewer patients than previously. Variable clinic template design enables appointment times to be adjusted to accommodate differences in services.

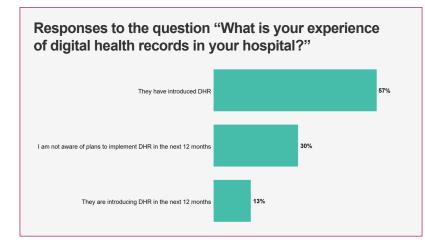
Treatment decisions are becoming more complex and require a shared approach between the medical team and the patient, their family and/or carers. There needs to be sufficient time for these discussions to ensure that patients are fully informed, and are able to ask questions, make choices and provide informed consent.

There is a growing expectation from patients

that their treatment will be delivered by a consultant. There is also an expectation that outpatient care will be provided closer to home and not in the secondary care setting unless specifically required. This necessitates new ways of working to ensure that patients are managed in the appropriate environment and pathway. Initiatives such

as referral triage, one-stop models, virtual clinics, and advice and guidance with patient-informed follow-up can transform current clinic models.

For appropriate and timely sharing of information, many units have introduced EPR systems, which





Quotes from consultants

"Adequate admin support – which is currently understaffed and under-resourced so that lots of admin is inappropriately directed at consultants"

"Admin support, a secretary and IT structure that improves efficiency rather than slowing down processes at every stage"

"Being free of the enormous admin burden I carry"

"

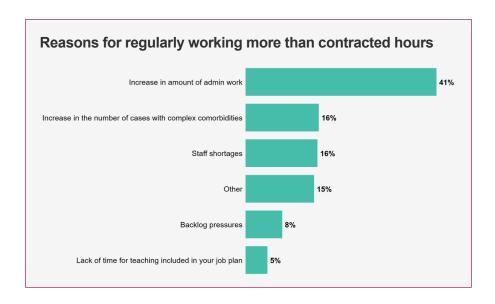
Responses to the question "Do you regularly work more than your contracted hours?"

Grade	Always	Frequently	Sometimes	Never
Consultants	31%	36%	29%	4%
Core trainees	29%	41%	27%	3%
Higher surgical trainees	30%	41%	28%	2%
SAS surgeons	19%	34%	41%	5%
LEDs	27%	37%	30%	5%
EST	25%	29%	38%	7%

require completion by the treating surgeon, often a consultant. EPRs are one of the keys to efficiency of the service. However, the introduction of EPRs has created significant additional administrative work for all clinicians, which has reduced the proposed efficiency.

Examples of implementation of EPRs in other countries show how different members of the team can take on this work and facilitate its development.

Two-thirds (67%) of consultants stated that they "always" or "frequently" work more than their contracted hours, with 41% of respondents giving the level of administrative work as the main reason.



Admission

Once the decision on a treatment has been made, an admission date is scheduled, which is usually the day of surgery. Increasingly, such scheduling is undertaken by administrative staff. Many surgeons have described an adverse effect of this approach on their ability to manage their operating lists owing to a loss of autonomy. This has a negative impact on clinician ability to treat patients as they would wish, which was reported by 41% of respondents.

The assessment of surgical patients is mostly undertaken by dedicated preoperative assessment teams that generally consist of nurses and anaesthetists although this is dependent on the specialty. In thoracic surgery, for example, there is a greater level of involvement of the surgical team in the preparation for surgery. Such pre-assessment improves shared decision making and is supported by initiatives (including digital consent) that enhance theatre efficiency.

The number of hospital beds provides an indication of the resources available for delivering services to patients. Across the member countries of the Organisation for Economic Co-operation and Development, there were an average of 4.3 hospital beds per 1,000 people in 2021; the UK had an average of 2.4 hospital beds per 1,000 people. Combined with staffing shortages, an insufficient core bed capacity means that hospitals are less able to cope with large influxes of patients.

The average length of hospital stay for elective admissions was 5.1 days in 2022.¹⁰ The strategy of surgical hubs with protected elective beds (as promoted by the Royal College of Surgeons of England)¹¹ has built on the principles developed in dedicated elective centres and use of independent sector facilities.

Operating theatres

Over half (56%) of respondents cited limited access to theatre as one of the main challenges facing surgery. According to the activity data from this census, 41% of consultants and 30% of SAS surgeons are undertaking two scheduled operating sessions per week.

This is a multifactorial challenge. The four principal issues are surgical workforce, anaesthetic workforce, theatre team and theatre infrastructure.

The availability of surgeons in the operating theatre is determined by their job plan with allocation of sessional time. The changes in practice across the specialties have significantly affected this availability. Although separation of emergency from elective commitments has helped in many specialties, there remain areas where this separation has not occurred. While 60% of consultants across all specialties are free from elective duties when on call, this is variable across specialties, with some still undertaking elective activity during on-call shifts.

The fixed nature of sessional commitments is inflexible, and the data from the census have demonstrated how this has been addressed by dual-consultant operating and making full use of allocated theatre sessions when members of the team are on leave. Dual-consultant operating has advantages as more complex cases can be completed more quickly, and more experienced surgeons can work with and mentor less experienced colleagues. The disadvantage is the need for a higher number of surgeons in the service.

Data from NHS England show a steady annual increase of approximately 6% in the number of SAS surgeons, who are projected to be the largest professional group in the surgical workforce within the next five years. The integration of this group of the workforce provides significant extra capacity. However, the working conditions described in their responses in this census clearly indicate an unhappy workforce who are not appropriately integrated, and who have only limited access to training and professional

development. This has an inevitable adverse effect on their job satisfaction.

The contribution of the EST has been shown to be mixed. In those units where the role of these individuals is well established, they can relieve some of the burden not only from surgeons but also from other colleagues in the theatre team. Conversely, there are many examples where their role is not well supported and this has created problems in the surgical team.

The development of surgical hubs has provided much needed extra capacity. Nevertheless, limitations remain in many units where the number of operating theatres is insufficient to meet the demand.

Word cloud of responses relating to "What would increase your productivity?"



Another consequence of surgical hubs is the impact on the capacity of both the surgical and anaesthetic workforces as well as the theatre team required to support them. This is exacerbated by winter pressures.

The results from the census highlight the overall effect of current working conditions on consultants in particular. There was a specific question asking what measures might enhance productivity. Most consultants who answered stated that access to operating theatres, adequate support staff and sufficient administrative support were the principal factors affecting their working conditions. This clarifies where appropriate investment is needed.

Responses relating to "What would increase your productivity?"

Count
802
738
590
310
194
191
180
164
158
116

Solutions

Despite the surgical workforce regularly working long hours, productivity remains a key issue. There are insufficient resources, which limits access and outcomes for patients, with a poor return from the NHS for the taxpayer. The census results paint a picture of a surgical workforce working long hours in a stressful environment, and a system that often hinders the delivery of surgical services rather than enabling all members of the team to deliver these services to patients in the most timely and efficient way.

Investment in emergency pathways is required, with ringfencing equivalent to elective capacity. This would improve efficiency in that appropriate patients could be seen by surgeons rather than by the emergency department team. There is also a role for surgeons to run 'hot clinics' during daytime hours, including cover for emergency theatres. These clinics are designed to streamline the patient journey and relieve pressure on emergency departments.

There is a need to reduce the administrative burden on consultants and enable them to spend more time on clinical activities (recommendation 1).

In order to progress with a consultant-led and delivered service, it is recommended that the way in which consultant surgeons work is changed significantly. There should be a year-on-year increase in the consultant surgeon workforce according to specialty demand (recommendation 2). Similar workforce increases are already in the pipeline for SAS surgeons.

There is an urgent need to increase theatre capacity by ensuring that existing theatre spaces are utilised to their full potential. Capital investment in new surgical hubs and additional ringfenced theatre spaces will be required. This will result in optimal use and enable additional recruitment of theatre staff to support the delivery of surgery (recommendation 2).

Sharing of good practice by NHS Trust organisations and Health Boards that have implemented annualised contracts and other innovative approaches to theatre optimisation should be encouraged. Theatre scheduling needs to be coordinated to reflect arrangements for annual and professional leave in order to ensure full theatre utilisation.

Transformation in the outpatient setting should be facilitated with dedicated administration time for new ways of working. This should include time for triage, advice and guidance (recommendation 3).

Issue 2: Sustainable workforce

Ensuring a sustainable workforce is key to success in any organisation. Business models focus on wellbeing, as reflected in work-life balance, promoting learning, encouraging flexible working and pride in achievement, which all promote high levels of job satisfaction.

Work–life balance needs to address the range and complexity of issues of working parents and carers. 12,13 Findings from the census highlight that the surgical team is struggling to meet these aspirations.

Burnout

Burnout is a state of physical or emotional exhaustion that also involves a sense of reduced accomplishment and loss of personal identity. It was selected as one of the top five current challenges in surgery by a larger proportion (61%) of respondents in this census than any of the other options.

The reasons for burnout are multifactorial, with variation both across the different professional groups and generally across the whole team. Over half (56%) of all respondents reported feeling valued by their clinical colleagues, 25% felt valued by their managerial colleagues and 72% by their patients.

A quarter (24%) of respondents stated that they are rarely optimistic about the future and a third (32%) rarely feel relaxed. The underlying problem cited by all professional groups was the excessive workload, which has had a considerable impact on work–life balance and wellbeing.

Proportions of respondents citing bullying and harassment as one of the main challenges in surgery SAS surgeons LEDs 34% EST 29% Consultants 22%

Working conditions and conflicts of priority

Half (49%) of all respondents cited working conditions as one of the main challenges while a slightly lower proportion (47%) cited conflict between clinical and managerial priorities.

Quotes on working conditions

"Theatre access – so much time is wasted arguing over theatre priorities"

"Reasonable expectation of what can be achieved in a given time rather than booking clinics and lists according to prioritisation driven solely by waiting time"

"Sadly, elective surgery in a stressed acute system is always the poorer relation with pressures on beds – bed capacity needs to be increased, staff retention is a major issue for allied professions"

"Less time spent responding to expedite requests that we have no capacity to meet demand for; similarly, less time spent relisting/reprioritising patients on theatre lists to accommodate more urgent patients"

Culture and environment

The culture, systems and processes in the NHS contribute to burnout and stress. Almost a quarter (24%) of respondents believe that the cultural environment in the workplace (including bullying and harassment) continues to affect individuals and also the delivery of surgical services. This increased to 36% for SAS surgeons and 34% for LEDs.

Consultants

Onerous job plans, with consultants frequently working beyond contracted hours and not taking their full annual leave entitlement, have resulted in many considering leaving the workforce. Twothirds (64%) of consultants aged 55–64 years plan to retire over the next four years. This will create a significant loss of experienced surgeons who could have roles in elective practice, training and mentoring. There are trends showing different approaches to work among those aged 35–44 years. These reflect a greater focus on work—life balance, with many negotiating contracts of fewer than 11 PAs, taking their full annual leave entitlement, considering working LTFT and showing less interest in private practice.

The variability across NHS Trust organisations and Health Boards in supporting 'retire and return' options has created a mixed economy both between and within these organisations. Implementation of national commitments to retention measures (such as 'retire and return', salary recycling and phased retirement), often supported at a local level, is reliant on the personal relationship between clinical directors and those seeking flexibility. There must be consistency in these options.

The findings from the census show that there have been challenges in recruiting to new or replacement consultant posts and this has increased the workload of individuals as well as teams. NHS Trust organisations and Health Boards have delayed such appointments, and there have been increased levels of activity shared among a smaller team, which adds to the stress.

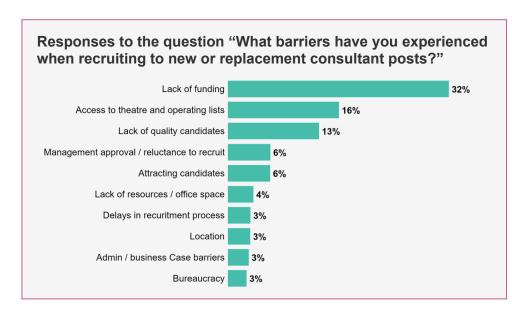
Surgeons in training

Surgery continues to be a popular career choice. The number of applicants for core surgical training has remained high. Annual data suggest that in the majority of specialties, there has been a reduction in the number of training posts of approximately 3% year on year.

Training has changed from being timebased to being dependent on the acquisition of competences in the context of high-level outcomes as defined by the GMC. The challenge with this approach lies in ensuring that trainees have gained sufficient experience by the time they are awarded a CCT, and newly appointed consultants often need support and mentorship from their senior colleagues while they develop their practice.

Surgeons in training have clearly described the difficulties they experience in gaining the necessary curriculum-defined knowledge and skills, and how this has adversely affected their job satisfaction and risk of burnout. Access to the operating theatre is fundamental for a craft specialty and despite the recovery following the COVID-19 pandemic, access continues to be a major barrier to trainee progress. Service requirements, particularly compounded by emergency rotas that lack flexibility and are not training-friendly, prevent trainees from being free to attend operating lists.

Especially during the core training years, trainees are often on duty with surgical teams with whom they do not normally work. Furthermore, dedicated time for training is not protected in trainers' job plans, which affects their ability to establish and maintain a relationship with their trainees.



Word cloud of responses from surgeons in training relating to "Why would you not recommend training in your specialty?"



Responses from surgeons in training relating to "Why would you not recommend training in your specialty?"

Category	Count
Lack of work-life balance	90
Pay	85
Lack of training opportunities	77
Workload and working hours	71
Length of training	57
Quality of training	50
Too much focus on service provision	46
Lack of support	43
Feeling undervalued	39
Rotations/commuting	37

Trainees were asked whether they would recommend training in their specialty. The most common reason cited for not recommending training was a lack of training opportunities and a poor work–life balance. A significant number of trainees (45% of core trainees and 28% of higher surgical trainees) have considered leaving the profession.

Recruitment to training programmes is variable. In some specialties, there are substantial challenges to ensuring that the numbers in higher surgical training relate to the numbers of consultants required in the future. There is also a regional effect,



Quotes from surgeons in training

"Mentally and physically draining, huge pressure with lack of support to achieve targets"

"Not enough staff numbers to allow you to attend all training opportunities, and having to cover extra hours without adequate rest"

"Currently, I often feel like a glorified admin assistant who sometimes stitches"

"If you are not ready to give your 200% and sacrifice your personal life, you must not come to surgery"

"Have to rerun the same cycle of gaining trust, being allowed to operate and start some independent operating towards end of the placement"



with shortages in some parts of the country. It remains to be seen whether NHS England's review of the distribution of training posts will have an impact on these shortages. Work–life balance is a priority for trainees; for this reason, many will seek appointments in the region in which they have trained. The expectation that surgeons in training will move and/or commute considerable distances is no longer tenable.

SAS Surgeons

Word cloud of responses from SAS surgeons relating to "What do you need to progress in your career?"

More time to sit FRCS
Moving to another region/abroad
Career guidance/dedicated
Career guidance/dedicated SLEs to demonstrate competence More participation (rather than just observation) Completing CESR/joining specialist register GPSI More support from Trusts/a regional lead Elimination of bullying & discrimination More flexibility Equitable treatment Fewer on call sessions Teaching/management opportunities Exam guidance More recognition of contributions/experience Increase in supervised opportunities More support from RCS More structured training/alternate pathways Focus beyond service provision SAS led care Fellowships/Secondments Robotics & simulation
More staff More consultant posts or alternative progression prospects
Study leave Childcare support
Funding Exam sign off Mentoring & support from trainers

Alternation of the support from the supp More managable workload Cess to theatre/trainir
upport for CESR application Completion of MRCS/FRCS exams Research projects/ audits/ presentations/ publication opportunities Greater flexibility Streamlined CESR process
Rotations between trusts Opportunity to develop Clear job plan & better rota management Access to courses/workshops/regional & national conferences

SAS surgeons form an established part of the workforce, and there has been a steady increase in the numbers of SAS surgeons and LEDs. Both groups described similar experiences in the census and these experiences are having a damaging effect on their job satisfaction. During the Royal College of Surgeons of England's work in devising the SAS strategy, 14

SAS colleagues reported feeling excluded from team and departmental meetings, stating that they are often overlooked when it comes to planning or developing the service and that they continue to be seen merely as the service providers

rather than full members of the team.

In addition, they noted that they do not have satisfactory opportunities for professional development, with only limited access to educational opportunities and support for career development. This is detrimental in terms of their appraisal and revalidation.



Quotes from SAS surgeons

"Need more support for development opportunities – can't get off the rota although opportunities are hypothetically available"

"I feel like a service provider – no support for my career progression"

"It is so difficult for the non-trainee as we don't have enough support, feedback and annual assessments"



Responses from SAS surgeons relating to "What do you need to progress in your career?"

Category	Count
Access to theatre/training	116
Mentoring and support from trainers	59
Support for portfolio application	59
More consultant posts or alternative progression prospects	29
Completion of MRCS/FRCS exams	27
More structured training/alternate pathways	25
Equitable treatment	23
Research projects/audits/presentations/publication opportunities	22
More recognition of contributions/experience	19
SAS-led care	19

LEDs

Word cloud of responses from LEDs relating to "What do you need to progress in your career?"

Reduction in obstacles to quailty care
Completion of medical degree and FY1 & 2

Clear job plan & better rota management
More participation (rather than just observation)
Guidance on the UK training system

Research projects/ audits/ presentations/ publication opportunities
Stability in employment
Subspecialty training
Allocated time
Elimination of bullying & discrimination
Access to courses
Fellowships/Secondments

Access to courses
Founding & access to courses
Subspecialty training
Allocated time
Access to courses
Founding & access to courses
Founding & access to portfolio building opportunities

Elimination of bullying & discrimination
Access to courses
Founding & access to portfolio building opportunities

Streamlined CESR process

Access to courses
Founding & access to portfolio building opportunities

Elimination of MRCS/FRCS exams
Access to courses
Founding & access to portfolio building opportunities

Streamlined CESR process
Career guidance
Opportunities to develop academically
Access to courses
Founding Core/HST

Rotations/commuting

More regional events
Allocated time to train

More staff

More staff

More consultant posts or alternative progression prospects
More structured training/ alternate pathways

Fewer barriers to joining Core & HST

Increase in supervised opportunities

More support from RCS

More support from RCS

More support from RCS

More support from RCS

LEDs described experiences that were similar to those of SAS surgeons. citing not feeling included in the team/ department, having limited opportunities for training and education, and having limited support in developing their career. This reflects the terms and conditions of LEDs being determined locally rather than nationally. There is a steady increase in the number of LEDs as there are many who complete foundation training but do not wish to immediately join training programmes, instead opting for gaining experience in service roles. Many take up training posts after 2–3 years, but they need to be supported

in their professional development during their time in LED roles.



Quotes from LEDs

"Less 'service provision' mentality, and more 'we are training a specialist' mentality"

"Need support tailored to my training needs, remove all bias towards LEDs regarding training, mutual respect and recognition"

"Stability and security of employment, employer who cares and understands that human resources are an investment"



Responses from LEDs relating to "What do you need to progress in your career?"

Category	Count
Access to theatre/training	87
Joining core/higher surgical training	42
Mentoring and support from trainers	35
Completion of MRCS/FRCS exams	28
Support for portolio applications	27
Allocated time and access to portfolio building opportunities	20
Research projects/audits/presentations/publication opportunities	18
More consultant posts or alternative progression prospects	13
Funding and access to courses	12
Equitable treatment	11
More structured training/alternative pathways	11

The EST

Word cloud of responses from the EST relating to "What do you need to progress in your career?":

More training posts

Exam completion Facilitating continuity of care

Ability to obtain consent patients in surgical procedures PAs are autonomous in On calls

Reduced pressure on services

College membership Evidence-based practice

College membership Evidence-based practice

Ability to obtain consent patients in surgical procedures PAs are autonomous in College membership Evidence-based practice

College membership Evidence-based practice

Ability to obtain consent patients in surgical procedures PAs are autonomous in College membership Evidence-based practice

College membership Evide

Succession planning Clin Ability to request xrays Clincial supervision Ability to prescribe CESR support rays Time & access to development opportunities/CPD

Flexible working Understanding & recognition of EST roles General practice career pathway Study leave Time & access to research opportunities Clarity on university courses

Structured training with allocated time/access to theatre & clinics

Local support, mentoring & better team integration Clear job plan, regulation, governance & development frameworks

Exam preparation sessions Access & funding for courses Clarity on consultant jobs Support from colleges/registered body

conditions Consultant post

Better pay/working conditions Consul Better employer-college communications Clarity for pre-masters SCPs



Quotes from the EST

"More information advertising to the NHS trusts about what our role is and differentiating our profession from others. Having a clear framework"

"Better understanding of my role to provide appropriate learning opportunities"

"To bring awareness of the role in the department as complementing the surgical team, not as a competitor among registrars' colleagues. Designated job role and responsibilities"



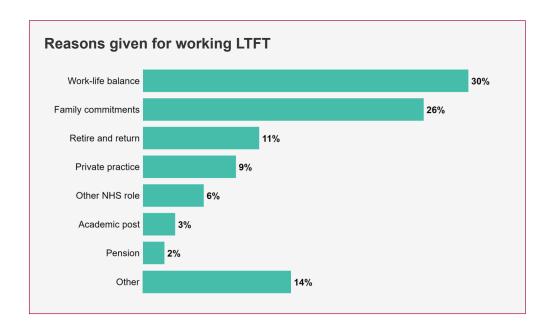
The experience of members of the EST is variable. Surgical care practitioners have a defined role with an evolving career structure. Other members of the EST have a mixed experience, with defined roles for some but less defined roles for others. In those circumstances, there can be difficulties working alongside surgical trainees, reflecting the uncertainty of their scope of practice as well as competition for clinical and technical opportunities. There is also the challenging issue of lack of pay parity for surgeons in training who have the same level of responsibility.

For all of these different staff groups, there are major problems in terms of ringfencing time for training and determining who should train them. Each group has different needs

> and although trainers should be aware of what is required, they may not have the capacity to provide it. This issue has now become more acute as the NHS long-term workforce plan has recommended a substantial increase in staffing numbers for those professional groups who make up the EST.3

Responses from the EST relating to "What do you need to progress in your career?"

Category	Count
Clear job plan, regulation, governance and development frameworks	76
Structured training with allocated time/access to theatre and clinics	76
Local support, mentoring and better team integration	52
Understanding and recognition of EST roles	32
Access and funding for courses	31
Time and access to development opportunities/CPD	20
More staff	17
Educational/project funding	11
Leadership/teaching/management opportunites	10
Clincial supervision	9



LTFT working

The census showed that approximately 11% of the surgical team work and train LTFT. Surgery will not be seen as an attractive specialty if it does not embrace flexible working, both for new recruits and for those moving into the later stages of their career.

One of the problems with LTFT working in surgery (as in other craft specialties) lies in staffing the emergency rota. Although some NHS Trusts have utilised non-medically qualified members of the surgical team to help fill gaps, this is not the entire solution. The trained surgical workforce must be of sufficient capacity to cover the gaps created when a significant proportion of staff choose to work on a flexible basis. Without this capacity, the popularity of surgery as a specialty is likely to diminish. In order to attract the best people, the approach to working practices needs to be modernised and any solutions need to consider the whole team.

Solutions

The reasons for burnout need to be understood by NHS Trust organisations, Health Boards and the Royal College of Surgeons of England as well as at national level. This will allow support processes to be developed that are readily accessible for all members of the surgical team.

The Royal College of Surgeons of England will work with NHS Trust organisations and Health Boards to develop a national focus on policies and guidance that have a beneficial impact on the wellbeing of surgeons (recommendation 4). This should include work around:

- bullying and harassment;
- · sexual misconduct;
- · flexibility and LTFT working;
- improving the working environment, such as providing places to rest, hot meals, dedicated spaces for personal study and facilities for parents returning to work.

The Royal College of Surgeons of England will work with the government and NHS England to increase the number of consultants to:

- reduce inequity in the excess workload;
- facilitate better teamworking through dual-consultant operating, and through support and mentoring for consultant colleagues in the early phase of their career;

- rationalise the workload in theatres so as to enhance operative training opportunities;
- provide sufficient trainers for all members of the surgical team;
- enhance flexibility and LTFT working to support a diverse workforce with varying needs;
- promote portfolio careers to enable consultants to have more varied job plans;
- incorporate educational, training and management sessional commitments into job plans.

The government, NHS England and the Royal College of Surgeons of England will need to work together to ensure that surgical departments, NHS Trust organisations and Health Boards have appropriate funding and adequate resources to replace consultants or to recruit to new roles.

Experienced surgeons who are considering retirement should be retained while maintaining current recruitment levels, not only to increase the size of the trained surgical workforce but also to increase training capacity in the short term. Succession planning should be undertaken on a regular basis to address natural retirements and enable planning of opportunities for those who wish to change their job plan as they become more senior (in terms of both age and experience).

Numbers of surgeons in training have reduced in the majority of specialties over the past ten years. Increased numbers of trainees are required across all specialties to support an expanded, trained workforce in the medium to long term (recommendation 5).

Matching service requirements by specialty more accurately will enable identification of career opportunities and facilitate supply of surgical trainees to meet consultant expansion. However, we cannot introduce more training slots without having sufficient training capacity,

which the census findings indicate is already fully stretched. There needs to be dedicated time for teaching and education; this should be contracted within the job plans of educational and clinical supervisors.

Clear job plans should also be developed for surgeons in training, with better rota management. This will enable personal planning to fit with work—life balance.

Training opportunities should be prioritised for surgical trainees on recognised training programmes.

There should be investment in the wider theatre and EST to support the delivery of surgical services (recommendation 6). More appropriate working conditions should be developed for SAS surgeons and LEDs, including mentoring and education. Some may wish to apply to the specialist register within the new GMC regulatory framework while others may wish to remain in their service role but there should be support available for career progression. Planning should take into account the expanding SAS cohort.

It is important to have consistent and appropriate support for study leave for all groups in training, with streamlining of course funding.

There should be recognition of the changing approach of an increasing number of the workforce to progress in service rather than in traditional training pathways, reflecting the GMC changes for application to the specialist register.

The roles of the different members of the EST need to be appropriately scoped. There should be suitable education, assessment and governance ensuring that their work complements that of surgical trainees, and that it enables career progression with appropriate levels of responsibility in the surgical team.

Issue 3: Working conditions – systems and processes

Changing working practices

The 2018 report from the Royal College of Surgeons of England's Commission on the Future of Surgery stated: "What is clear is that the role of the surgeon will become increasingly multifaceted and blurred with that of other professionals. The future surgeon will need to be prepared to adapt to what the patient needs, and the nature of their role may change markedly over the lifetime of their career." 15

It is therefore clear that this model of working requires support from across the surgical team, with evolution of roles undertaken by the whole breadth of professionals to enable consultants to work differently. In addition, these supportive roles need to be recognised as an integral part of the surgical team to ensure safe provision of care for patients. However, findings from the census indicate that different members of the surgical team are not able to work as efficiently or as effectively as they otherwise could.

The Royal College of Surgeons of England supports NHS England's aim of doubling the

number of medical school training places, as set out in the NHS long-term workforce plan.³ Nevertheless, this goal (taken together with the increase in trainees, SAS doctors and the EST also described in the plan) cannot be supported without an increase in training capacity as well as in dedicated time for training and education in job plans. The inability to train was considered a major challenge by 38% of respondents in the census, which increased to 52%



Quotes on working experiences

"Comorbid patients on the rise, making the surgical take challenging, especially when admitted patients have medical issues and can't get a physician involved"

"Growing pressure to provide more and more care to increasingly more complex patients with more and more comorbidity without the increase in the facility capacity"

The census certainly reflects features of this statement with changes in the role of the current consultant. In some specialties, the number of surgical interventions is reducing in favour of more outpatient, medical or pharmaceutical interventions.

There has been an increase in the complexity of cases, reflecting both the condition with which patients are presenting but also their comorbidity. According to comments received in the census, this affects both elective and emergency practice.

Decision making has become more challenging and time consuming. Patient expectations have increased, which has driven a more consultant-delivered service.



Quotes on patient and public expectations

"The expectation that the surgeon will be available 24/7. And not only by the patients and staff but within the surgical community as well. Work-life balance is impossible"

"The public must be re-educated that their surgery need not be carried out by a senior surgeon only, but that there are very good alternatives if one is to keep an affordable, effective NHS"

"Combination of low investment and high patient demands is creating a discrepancy between what patients expect and what we can deliver" for surgeons in training and 43% for SAS surgeons. The provision of dedicated time in consultant job plans is missing for most respondents. The availability of support and mentorship for consultants during the early part of their career is compromised as the workload of their more experienced colleagues precludes any spare time.

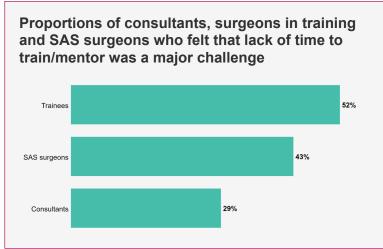
Innovations in surgical practice are vital to advance treatment options. Introducing these innovations requires time to allow surgeons to learn new techniques. This can increase the workload for consultants and take them away from their clinical activity. Dual-consultant operating facilitates these developments and supports early-years consultants.

Solutions

The traditional job plan model is no longer appropriate for many surgeons. The job plan should reflect the varying roles within specialties. It should be phased to reflect career progression and include options for contract extension for those nearing retirement (recommendation 7).

Job plans should be available for all members of the surgical team. These should:

- reflect variation in emergency and elective workload;
- include flexibility to ensure full use of working time (e.g. use of theatres when vacant owing to annual leave);
- facilitate career development phasing from early through to middle/later years of a consultant career – including appropriate work for those returning after taking their pension;
- enable flexibility in the later stages of a career, with a less onerous on-call commitment, and greater focus on elective operating, training and education, mentorship and leadership – potential for portfolio working/job plans;
- include opportunities to learn, and develop service transformation and innovation;
- provide dedicated time for teaching and training.



The Royal College of Surgeons of England will work with the NHS England Workforce, Training and Education Directorate to ensure that there is contracted and protected time for educational and clinical supervisors to train all members of the surgical team (recommendation 8).

There should be coordination of the roles and activities of the different members of the surgical team to ensure the most efficient use of the existing workforce (recommendation 9). This should comprise greater inclusivity in the surgical team with recognition of the contribution of all team members, particularly SAS surgeons/LEDs and members of the EST.

The Royal College of Surgeons of England will work with NHS Trust organisations, Health Boards and National Statutory Education Bodies to ensure that all surgical procedures and operations are viewed as training opportunities, and that training the next generation of surgeons is embedded in all aspects of service delivery.

Surgical training should be given the same priority as service provision as any lack in emphasis on training will adversely affect the future of surgery and its practice. This should include making use of all available facilities (including in the independent sector).

There should be more recognition of the importance of administrative support. Administrative tasks should be shared across the surgical team to reduce the burden of those aspects of work that are not appropriate for consultants, surgeons in training or other clinicians such as those in Doctor's Assistant roles.¹⁶

Conclusions

Productivity has decreased and waiting lists have ballooned over the past decade owing to underinvestment and workforce shortages in the NHS.

The COVID-19 pandemic created significant additional adverse effects on waiting times, surgical training and staff wellbeing. These factors have reduced the overall morale of members of the surgical team, which has affected productivity. The root causes of this crisis, however, precede the pandemic.

This census demonstrates that in order to tackle waiting lists and improve surgical services in a meaningful and sustainable way, we need transformative solutions.

Providing a supportive, well-resourced working environment is vital to reducing burnout and improving morale. Continuing to invest in surgical hubs across the country, maximising the use of theatre capacity and reducing the administrative burden on surgeons so that they can concentrate their skills on clinical activities would increase productivity and allow surgeons to operate more efficiently.

In order to ensure a sustainable surgical workforce, targeted and consistent actions are required to improve retention. There is an urgency to increase consultant numbers year on year. This will ensure that the current consultant workforce is retained and able to meet growing demands as well as long surgical waiting lists. Training for all members of the surgical team must be provided by trainers with dedicated time for training.

The whole surgical team needs to embrace new ways of working collaboratively with stakeholders to enhance efficiency. Service transformation and innovation must be built into job plans with dedicated time for learning and implementation. Opportunities should be available for all members of the surgical team to work flexibly, and these should include learning, education and research in conjunction with clinical commitments.



Appendix 1: Methodology

The online census was developed as a questionnaire that was created using Microsoft Forms to be completed on a computer or mobile device.

It was accessible via a link and QR code. There was a variety of question types, including binary answers, drop-down menus, tick-box responses and free text. No identifiable data were collected, ensuring that responses were anonymous.

The link to the survey was disseminated to the surgical workforce through various channels across the UK, including emails to the memberships of the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Royal College of Physicians and Surgeons of Glasgow, and members in Wales and Northern Ireland. The survey was also shared with non-college members through social media, via the Surgical Specialty Associations, the Joint Committee on Surgical Training, the Specialty Advisory Committees, training programme directors, SAS doctor networks, ASiT, BOTA and the GMC, as well as at trust level, via staff bulletins and emails to surgical team members, and through voluntary local leads who promoted the census to their colleagues.

Headcount data were compiled from a variety of sources including the Joint Committee on Surgical Training, NHS Digital, StatsWales, NHS Education for Scotland Digital and the Department of Health in Northern Ireland. The 6,348 responses received represent approximately 25% of the UK surgical workforce.

The survey was open from 2 May to 30 June 2023. There was a charity donation for every response submitted as an incentive to encourage as much participation as possible.

The results were collated and analysed using Microsoft Excel and Microsoft Power BI, allowing thorough review of both the quantitative and qualitative data. The sections in Appendix 5 pertaining to individual specialties were written with input from the corresponding surgical specialty associations.

In addition to the main report, there will be an interactive toolkit that allows more granular investigation of the data for all stakeholders to interrogate.

Appendix 2: Limitations

This census was based on a questionnaire survey of all members of the surgical team. Such an approach has a number of limitations in terms of its design, its target population and the methods used to elicit responses.

The questions were determined by three topic domains in order to obtain a snapshot of the existing workforce and its activity as well as the views of the workforce on qualitative aspects of their working lives. How questions were phrased could have influenced the answers given. There is no doubt that the questions in the census do not provide answers to all issues related to the NHS and it is evident that the questions could have been phrased more specifically. In addition, they missed some topics that could provide more insightful data.

The target population for the census was all members of the surgical team, with the challenge being to ensure that these were all identified. The available databases for members of the surgical team are limited as they are not comprehensive and so it is highly likely that many did not receive the questionnaire. Furthermore, given that participation was voluntary, there are likely to be differences between those who replied and those who decided not to, which will lead to possible self-selection bias in the data.

This may have been a contributing factor behind why there was a proportionally higher number of female respondents. In order to encourage participation, the survey was conducted anonymously and we therefore did not send individual survey links to individual respondents or collect respondents' IP addresses. Consequently, it is possible that individuals may have submitted more than one response.

The percentages referenced and shown in the graphics represent the results excluding any 'blank', 'prefer not to say' and 'not applicable' responses, which represented only a small proportion of answers.

The Royal College of Surgeons of England ran a pilot survey covering two large NHS Trusts before launching the main census. The lessons learnt from this pilot assisted us in designing the census in a way that would optimise the number of responses received. However, despite all of the measures taken to involve as many as possible (as described in the methodology outlined in Appendix 2), it is clear that more could have been done.

While the above points illustrate the limitations of this census, they also highlight how to improve the accuracy and quality of the findings in any future iteration.

Appendix 3: Acknowledgements

The Royal College of Surgeons of England would like to express our gratitude to all those who were involved in preparing Advancing the Surgical Workforce: 2023 UK Surgical Workforce Census Report.

This report would not have been possible without the support and involvement of:

- The Federation of the Surgical Specialty Associations
- The Royal College of Surgeons of Edinburgh
- The Royal College of Physicians and Surgeons of Glasgow

We would also like to acknowledge the valuable contributions of:

- The surgical specialty associations and trainee associations:
 - ASiT (representing surgeons in training from all 10 surgical specialties)
 - BOTA
 - Cardiothoracic surgery
 - SCTS
 - NTCCTS
 - General surgery
 - ASGBI
 - ABS
 - ACPGBI
 - ALSGBI
 - AUGIS
 - Neurosurgery
 - SBNS
 - BNTA
 - · Oral and maxillofacial surgery
 - BAOMS
 - JTG

- Otolaryngology
 - ENT UK
 - AOT
- Paediatric surgery
 - BAPS
 - TriPS
- Plastic surgery
 - BAPRAS
 - PLASTA
- Trauma and orthopaedic surgery
 - BOA
- Urology
 - BAUS
 - BSoT
- Vascular surgery
 - Vascular Society
 - Rouleaux Club
- · General Medical Council
- · NHS Trust organisations and Health Boards
- RCS England Workforce and Training

Committees

- · Local census leads
- · Joint Committee on Surgical Training
- · Specialty Advisory Committees
- Training programme directors
- Surgical tutors
- Regional boards
- SAS, LED and EST professional groups
- · Women in Surgery Forum
- Pride in Surgery Forum

Appendix 4: Contributors

RCS England Workforce and Training Committee

RCS England Strategy, Workforce and Training

- Karen Smith
- TJ Gribben

RCS England Business Intelligence Unit

- Tim Hampton
- Tilly Russell

RCS England Membership, Marketing and Communications

- Lucy Davies
- Nicola Rowe
- Nicola Kane
- Tyla Joubert
- Victoria Holloway
- Áine Magee
- Claire Wimborne
- Mandy Webb
- · Jessica Sheridan-Sneyd
- Kate Shehan
- Ross Hextall

RCS England Transform

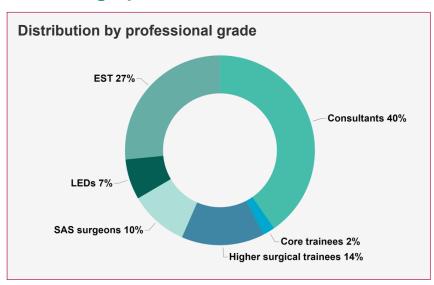
Jackie Weller

Appendix 5: Surgical specialties

1. Cardiothoracic surgery

There were 290 responses from members of the surgical team who declared cardiothoracic surgery as their specialty.

1.1 Demographics

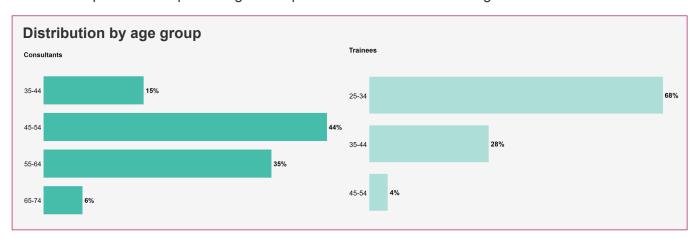


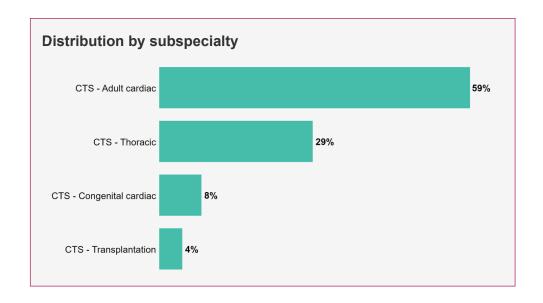
There were 117 responses from consultants and 47 from surgeons in training.

61% of the respondents were male and 37% were female.

Consultants: 78% male, 21% female Trainees: 64% male, 34% female

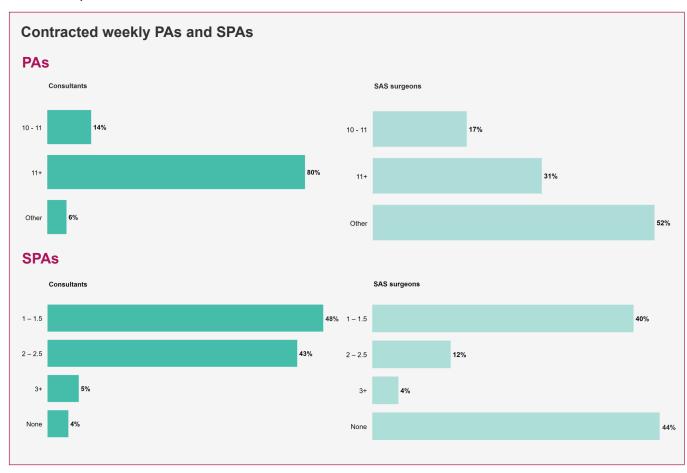
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

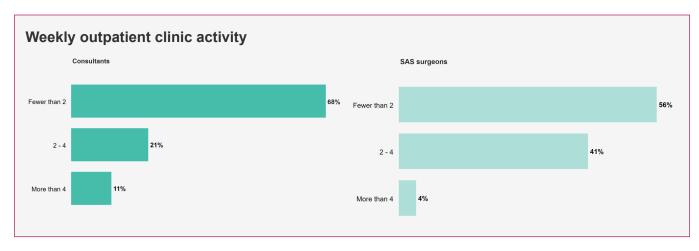


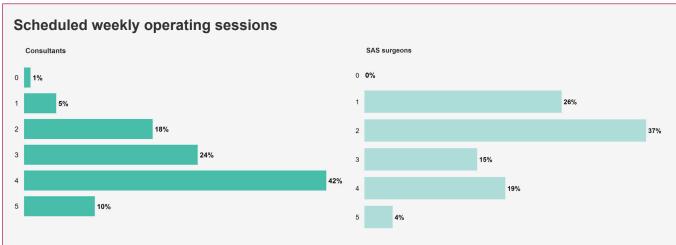


1.2 Job plans and activity

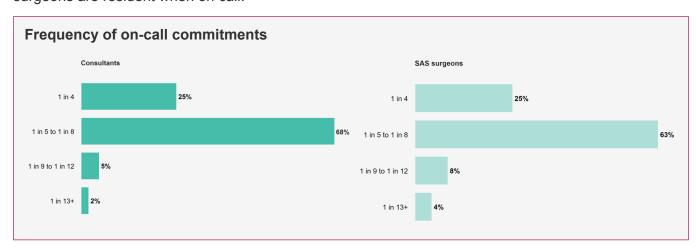
94% of respondents work full time while 6% work LTFT.







95% of consultants and 93% of SAS surgeons have an on-call commitment. 60% of SAS surgeons are resident when on call.



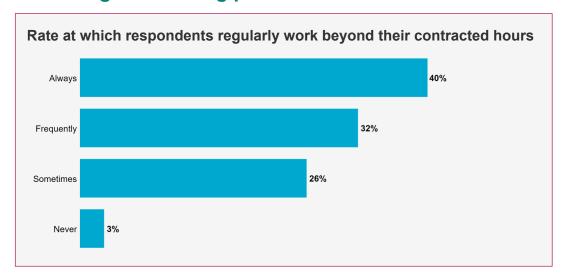
1.3 Recruitment and retirement

Trainees on a run-through programme must decide at the end of ST3 between cardiac and thoracic surgery.

ST4 entry to thoracic surgery has recently been introduced to address the predicted increased workload that will result from the expansion of the national lung cancer screening programme.

23% of consultants plan to retire over the next four years.

1.4 Change in working practices



The rate of 40% of respondents in cardiothoracic surgery always working beyond their contracted hours is the highest rate for all specialties.

Cardiothoracic surgery has the highest rate of scheduled operating sessions, with lower rates of outpatient clinics.

On-call rotas in cardiothoracic surgery are among the most onerous of all specialties. There is some variation, with significant numbers of 1:3 rotas with internal cover in thoracic surgery. On-call shifts in cardiac surgery involve more urgent cases than in thoracic surgery, with larger centres seeing more complex cases.

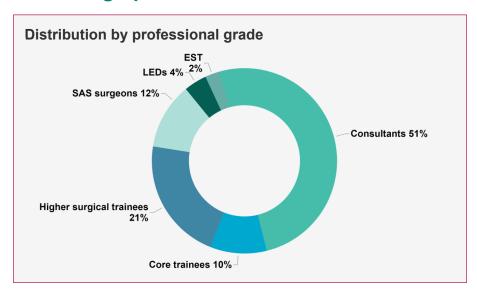
It is of note that there are still consultants with both a cardiac and thoracic interest.

There are challenges relating to balancing clinical and managerial priorities given the managerial focus on achieving targets.

2. ENT, head and neck surgery

There were 526 responses from members of the surgical team who declared otolaryngology as their specialty.

2.1 Demographics

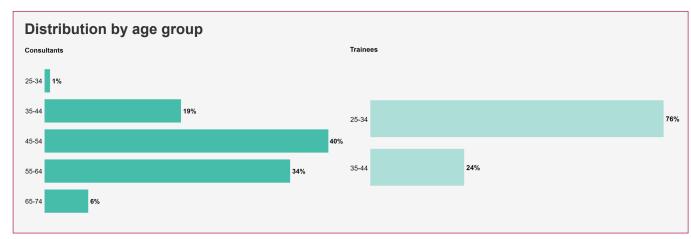


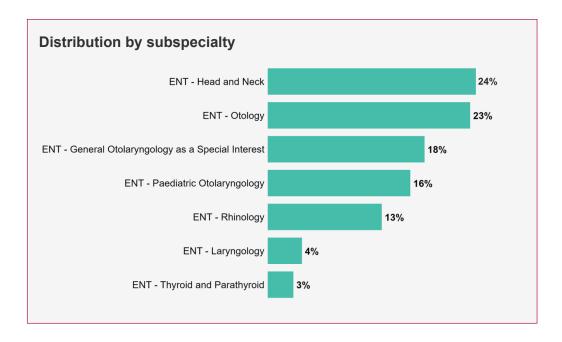
There were 266 responses from consultants and 165 from surgeons in training.

62% of the respondents were male and 37% were female.

Consultants: 71% male, 28% female Trainees: 54% male, 44% female

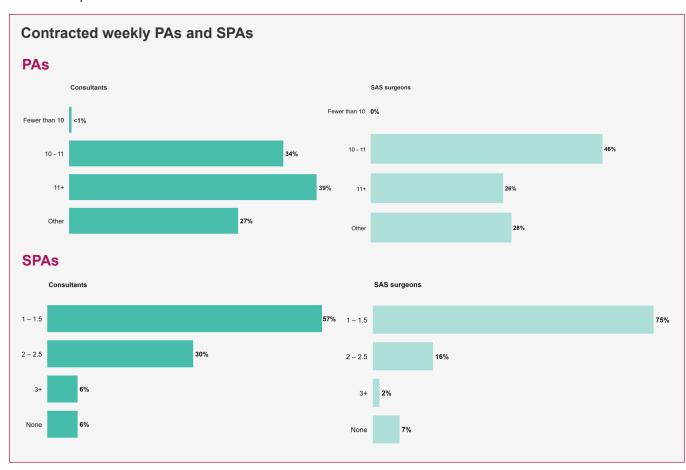
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

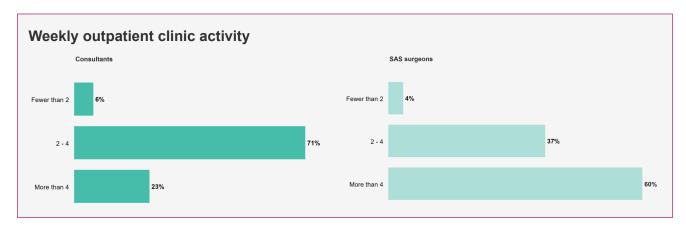


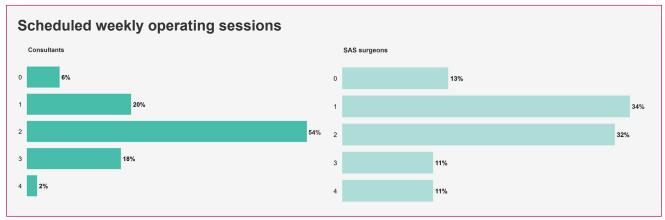


2.2 Job plans and activity

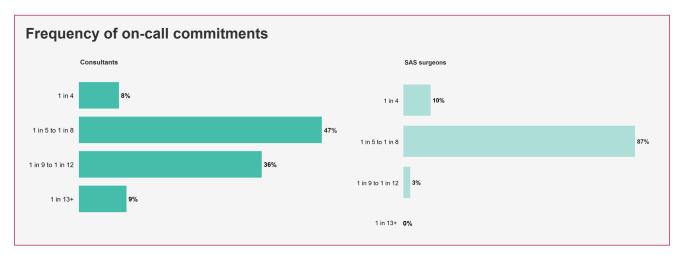
85% of respondents work full time while 15% work LTFT.







80% of consultants and 68% of SAS surgeons have an on-call commitment. 15% of SAS surgeons are resident when on call.



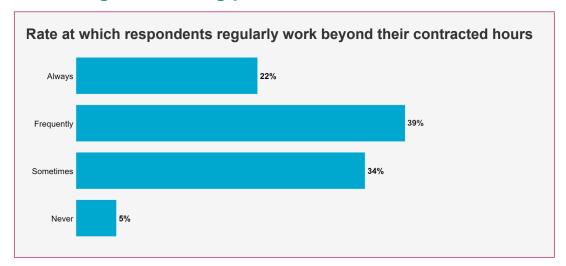
2.3 Recruitment and retirement

There are concerns about the numbers being recruited into training.

Challenges exist with regard to filling substantive consultant posts. There are 157 vacancies in non-substantive posts with 36 post-CCT surgeons in locum posts and 33 non-CCT surgeons in consultant-equivalent posts. (Data source: Otolaryngology Specialty Advisory Committee, April 2023)

32% of ENT consultants plan to retire over the next four years, which is above average for the other surgical specialties.

2.4 Change in working practices



Referral patterns: There has been an increase in referrals of intermediate complexity from primary care, with a perceived lack of confidence among primary care clinicians to manage ENT conditions.

The data indicate that 71% of ENT surgeons have 2–4 outpatient sessions weekly.

Theatre availability: 54% undertake only 2 operating sessions weekly.

Head and neck operating lists are likely to have 1 case on a 2 or 3 session list. This is in contrast to some more general elective lists that can extend to 3–4 cases per list.

SAS surgeons have a higher number of clinics and fewer operating lists.

On-call rotas: While the frequency of on-call commitments remains stable, being on call is perceived as more onerous for consultants as they are often supported by less experienced trainees and are consequently called in for low-complexity problems.

Numbers of surgeons in training are limited in smaller units and in recent years, trainees have often been less experienced.

Support: Infrastructure issues have not always been supported by service configuration changes, such as the introduction of advanced nurse practitioners. An example of change of practice affecting trainee experience is the frequent use of percutaneous tracheostomies with fewer open conventional tracheostomies being performed.

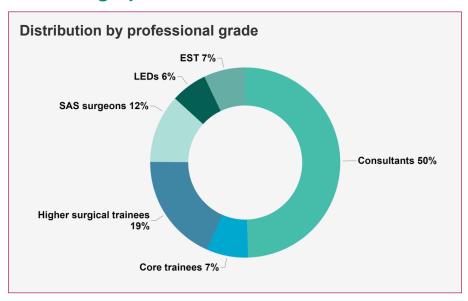
Effect of COVID-19: It is of note that all aspects of trainee experience were greatly constrained during the COVID-19 pandemic. The pandemic led to severe limitation in theatre availability, and recovery in some units has been slow and incomplete.

Elective surgery has borne consequences in preference to cancer surgery. This inevitably leads to increased use of medical therapy for non-cancer conditions where possible.

3. General surgery

There were 1,949 responses from members of the surgical team who declared general surgery as their specialty.

3.1 Demographics

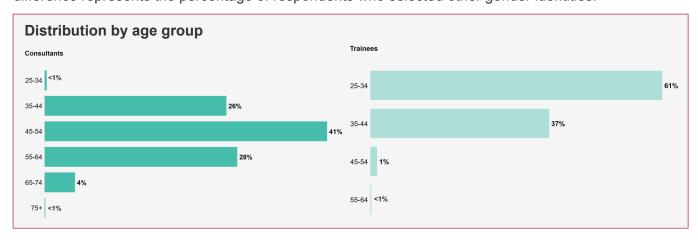


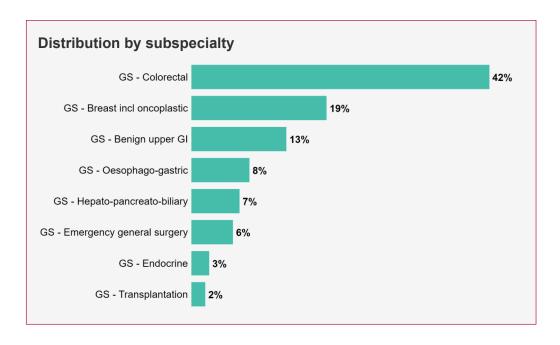
There were 965 responses from consultants and 499 from surgeons in training.

59% of the respondents were male and 41% were female.

Consultants: 68% male, 31% female Trainees: 47% male, 53% female

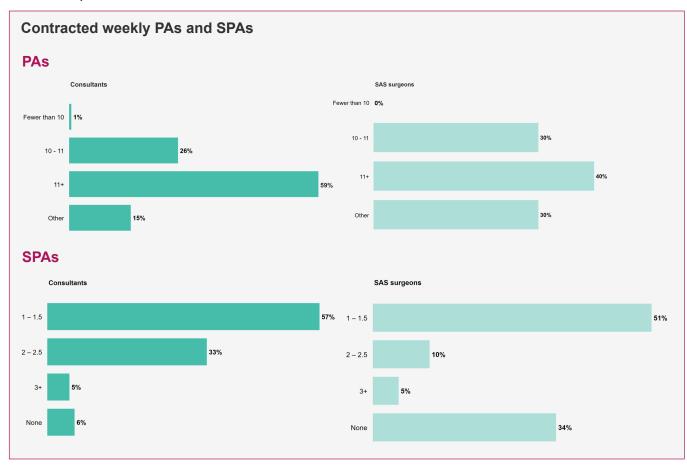
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

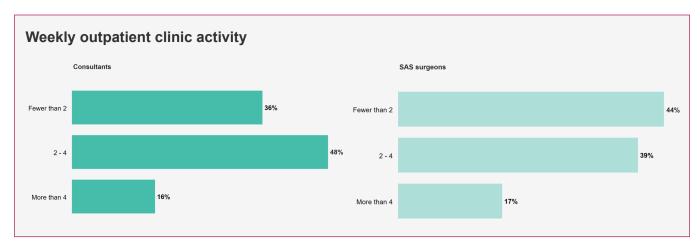


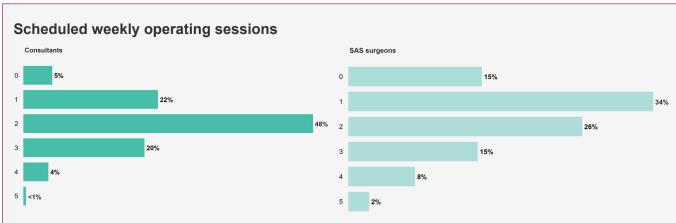


3.2 Job plans and activity

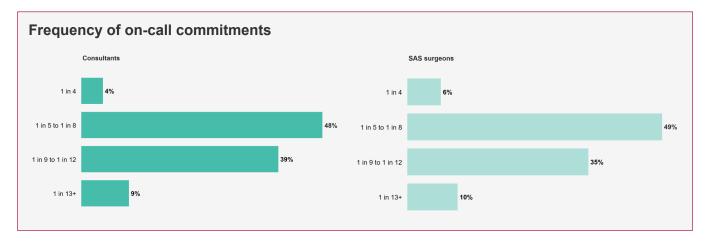
91% of respondents work full time while 9% work LTFT.







75% of consultants and 74% of SAS surgeons have an on-call commitment. 77% of SAS surgeons are resident when on call.



3.3 Recruitment and retirement

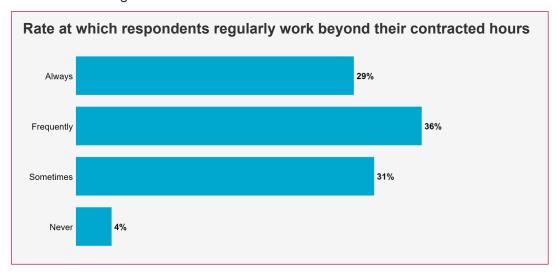
Trainee numbers are consistent and as such, the pipeline is about right for current consultant numbers. If consultant numbers were to increase, there would need to be an expansion of trainee numbers.

There will be a challenge to ensure that the balance of specialist interests of surgeons in training is consistent with the replacement of consultants who have had a more general interest.

26% of consultants plan to retire over the next four years.

3.4 Change in working practices

General surgeons have onerous job plans combining both elective work and on-call duties for unselected emergencies.



Elective operating is increasingly moving to 6 days a week, including Saturdays. Implementing a 12-week rota to ensure efficient use of operating theatres has proved problematic as the working week has been disrupted without scheduled sessions. In addition, there has been an increase in the number of cases as direct access referrals for diagnostics are picked up by relevant consultants, again making it difficult to manage all referrals efficiently. This approach is also challenging in terms of outside commitments.

There is a significant SAS contribution in general surgery, and these staff need appropriate support and professional development.

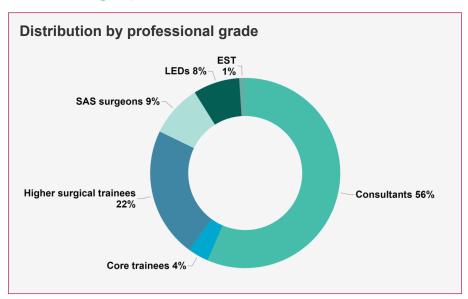
Attempts to reduce the number of PAs per week to 12 or fewer have had limited success. Although this was ostensibly to improve health and wellbeing, in practice this has simply reduced the direct clinical care sessions, and waiting times and lists have increased as a result.

The results for breast surgery have shown the highest proportion of women who are overall younger than other specialties/subspecialties so a predicted lower rate of retirement. There are challenges relating to access to theatre, particularly in terms of dual operating with reconstructive surgery colleagues.

4. Neurosurgery

There were 393 responses from members of the surgical team who declared neurosurgery as their specialty.

4.1 Demographics

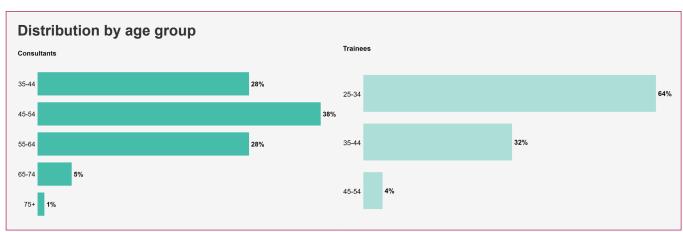


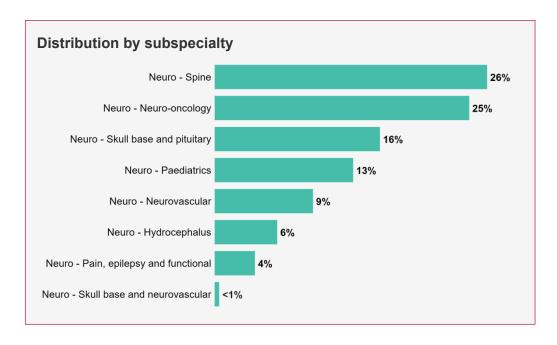
There were 222 responses from consultants and 101 from surgeons in training.

81% of the respondents were male and 18% were female.

Consultants: 87% male, 12% female Trainees: 76% male, 22% female

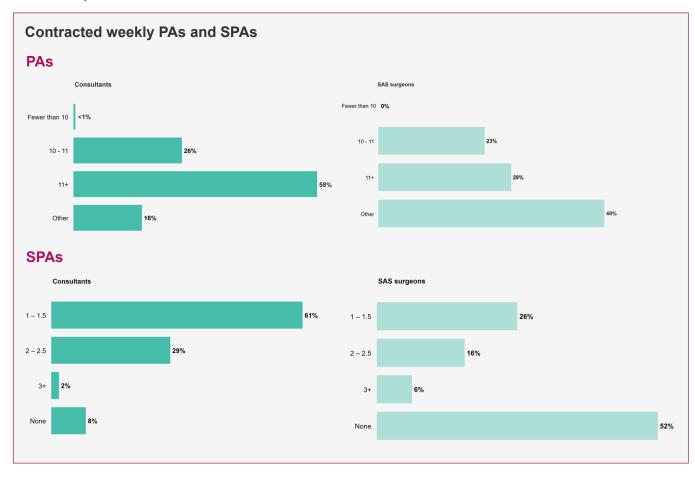
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

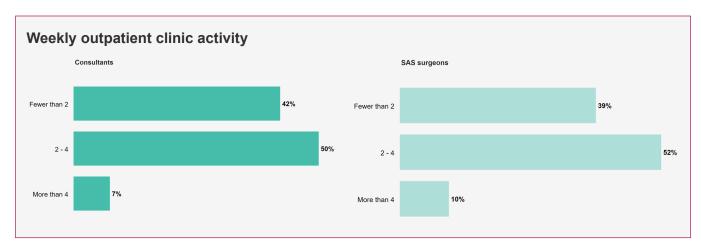


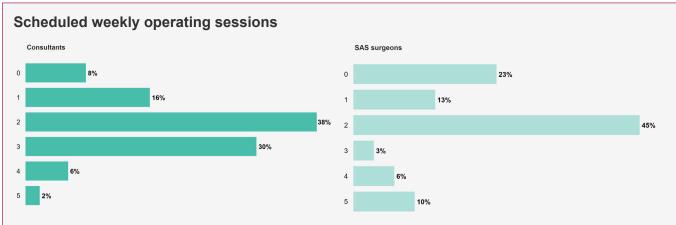


4.2 Job plans and activity

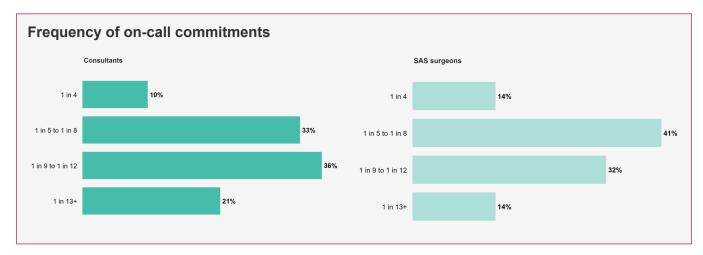
92% of respondents work full time while 8% work LTFT.







85% of consultants and 74% of SAS surgeons have an on-call commitment. 57% of SAS surgeons are resident when on call.



4.3 Recruitment and retirement

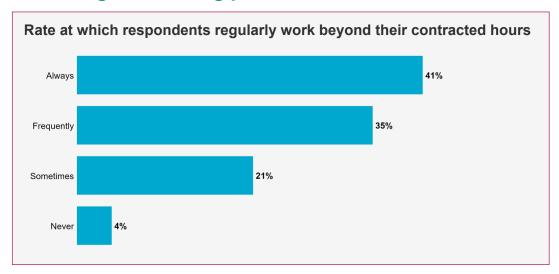
There are insufficient numbers of consultant posts to meet the current CCT output.

The consultant population in neurosurgery is generally younger than in other specialties: 66% are aged 54 years or younger.

23% of consultants plan to retire over the next four years. There are no vacancies for the excess CCT output and there is consequently an oversupply of neurosurgeons.

There has been an increase in the number of women in training.

4.4 Change in working practices



There are long waiting times for spinal surgery.

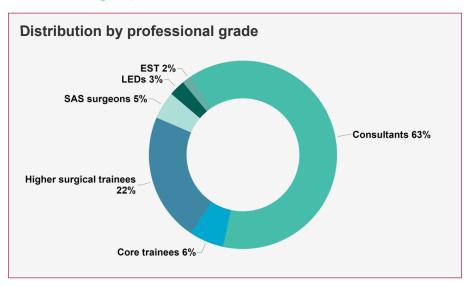
There is some interest in the medical interventional thrombectomy credential.

There is variation in different subspecialties of neurosurgery.

5. Oral and maxillofacial surgery

There were 253 responses from members of the surgical team who declared OMFS as their specialty.

5.1 Demographics



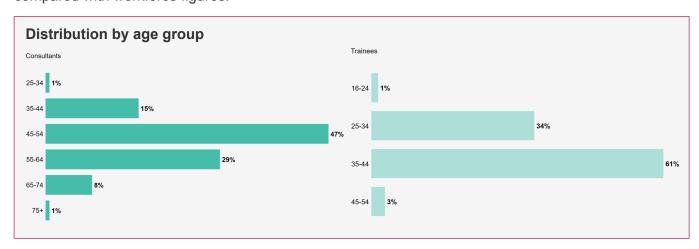
There were 159 responses from consultants and 71 from surgeons in training.

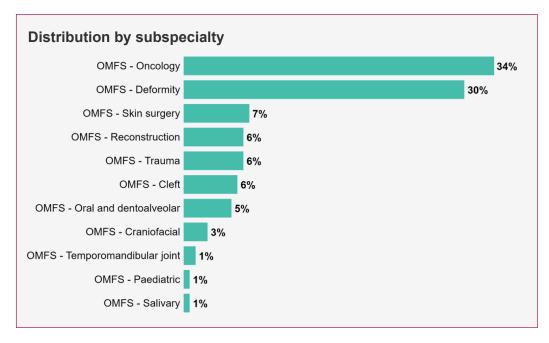
73% of the respondents were male and 26% were female.

Consultants: 81% male, 18% female Trainees: 67% male, 33% female

Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

Women respondents are slightly over-represented in both consultant and trainee numbers compared with workforce figures.

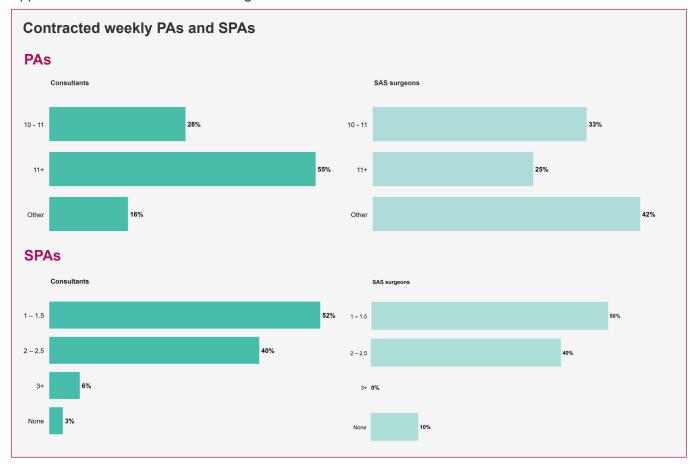


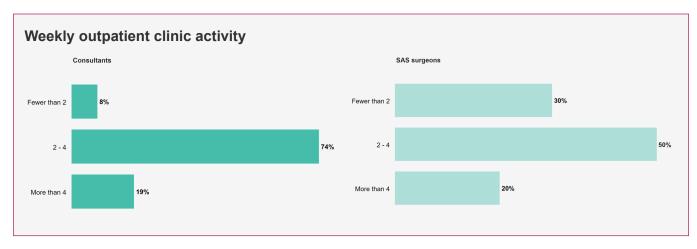


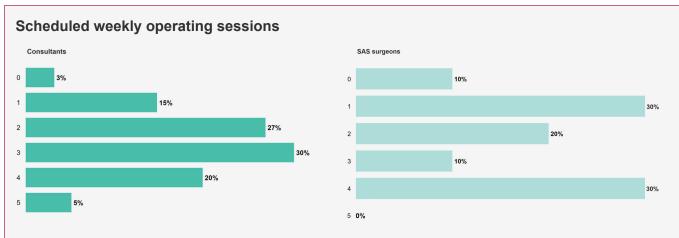
For most OMFS surgeons, the primary subspecialties are deformity and oncology. The census asked respondents to declare their primary subspecialty interest only and so this does not reflect other additional areas of interest they may have.

5.2 Job plans and activity

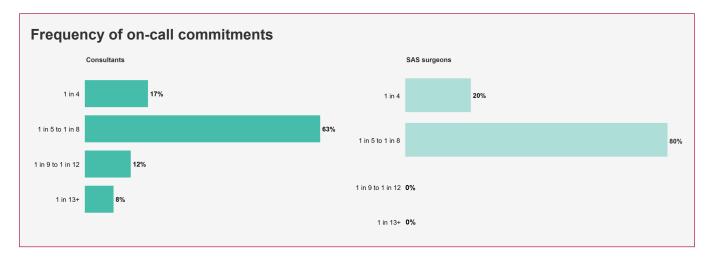
89% of respondents work full time while 11% work LTFT. There is evidence that more OMFS trainees and new consultants want to work LTFT to achieve a better work–life balance, and this applies to both male and female surgeons.







83% of consultants and 50% of SAS surgeons have an on-call commitment. None of the SAS surgeons are resident when on call.



5.3 Recruitment and retirement

There is a significant problem with recruitment, reflecting the requirement for dual medical and dental degrees. This is a particular issue for ST3 posts as ST1 posts are already oversubscribed. This is an area that can be expanded with increased ST1 run-through posts that have head and neck themed training posts.

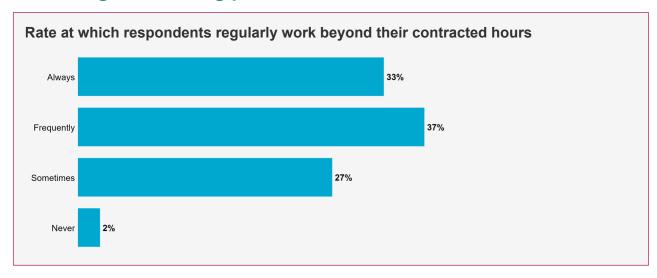
The consultant cohort in OMFS is older than for other specialties owing to the longer training duration. In addition, the specialty has the highest expected retirement rate, at 35% over the next four years. Consideration should be given to retaining older surgeons in the workforce as pensions and pay are one of the reasons for retirement.

It is predicted that there will soon be too few consultants to maintain service needs. Increased use of the hub and spoke model should be explored in areas where this is not yet in place so teams are larger with less onerous on-call commitments.

There are shortages in the East of England region and in Northern Ireland due to insufficient resources.

The higher proportion of women trainees will increase the number of women consultants in OMFS.

5.4 Change in working practices



20% of referrals from primary care are for oral conditions that are treated non-operatively.

Larger centres have a heavy trauma workload, which is not reflected in the data. (These centres have no elective commitment when on call.) The hub and spoke model can make this less onerous but will not work in all geographic areas.

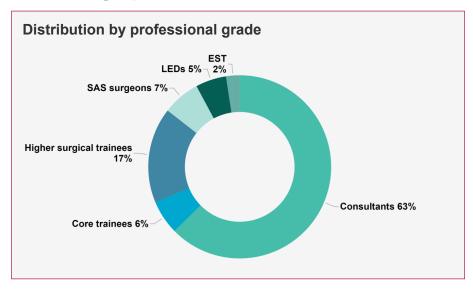
The recent introduction of EPRs has greatly reduced the numbers of patients being seen in clinic, which in turn has reduced the number of cases for surgery. Improvements in EPRs and electronic dictation with better administrative support would improve efficiency.

SAS staff in OMFS are mainly dentists and their practice comprises predominantly dentoalveolar work. This group should be supported and developed in the workforce but because they are generally dentally qualified, they do not have the qualifications and opportunities to progress to consultant level as they would in other medical specialty posts via the portfolio route.

6. Paediatric surgery

There were 166 responses from members of the surgical team who declared paediatric surgery as their specialty.

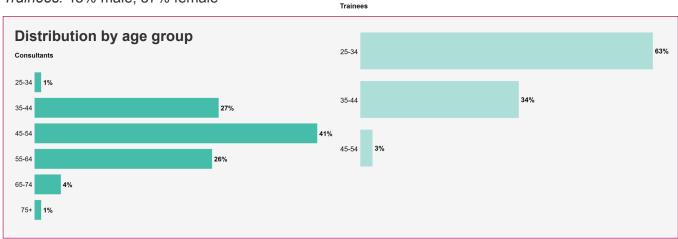
6.1 Demographics

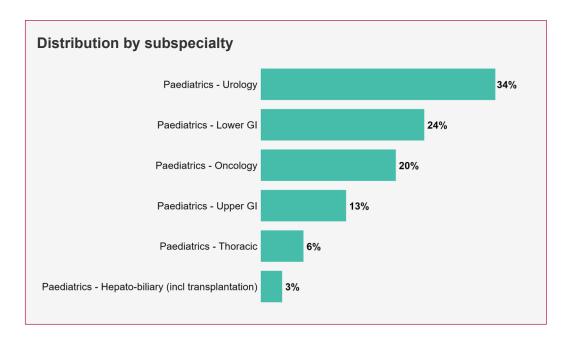


There were 104 responses from consultants and 38 from surgeons in training.

58% of the respondents were male and 42% were female.

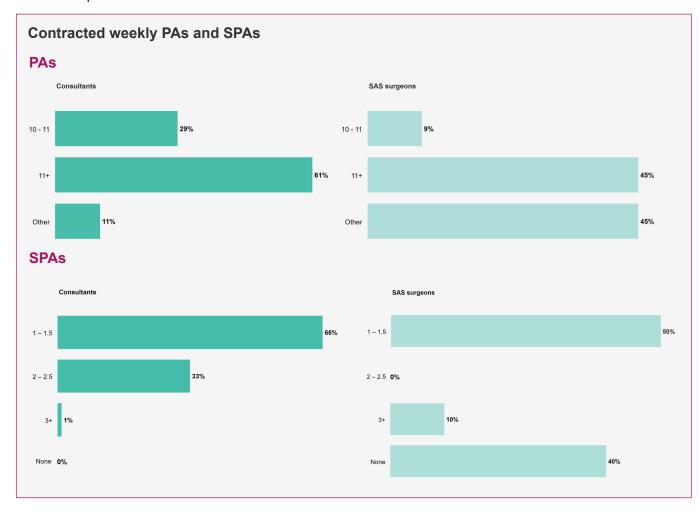
Consultants: 66% male, 34% female Trainees: 43% male, 57% female

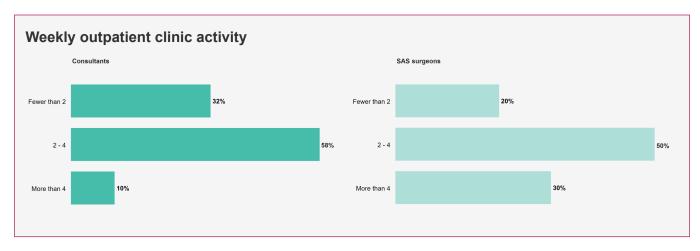


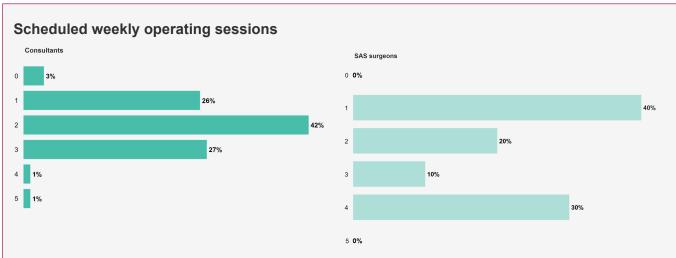


6.2 Job plans and activity

92% of respondents work full time while 8% work LTFT.

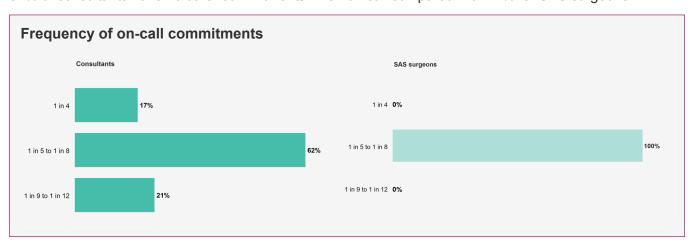






90% of consultants and 90% of SAS surgeons have an on-call commitment. 38% of SAS surgeons are resident when on call. This compares with only 6% of consultants.

84% of consultants have no other commitments when on call compared with 44% for SAS surgeons.

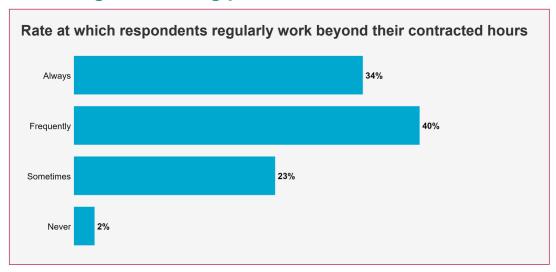


6.3 Recruitment and retirement

57% of surgeons in training are women.

22% of consultants indicated that they plan to retire over the next four years. 34% of these stated that this will be earlier than they had originally planned.

6.4 Change in working practices



44% of consultants do not take their annual leave allowance.

45% of consultants have considered leaving their job within the past year.

93% of consultants work full time.

34% of consultants are women.

The service is consultant-delivered.

Changes in centre design have resulted in larger day-case facilities. The volume of operating has significantly decreased. There has been an increase in two-surgeon operating.

There are a number of factors that affect workforce planning in paediatric surgery. There are geographical differences in consultant numbers between centres, with some centres being understaffed. The birth rate is at best static but is probably falling, which will need to be borne in mind when planning total consultant numbers.

The on-call commitment is becoming less frequent. Although this leads to an improved work–life balance, it requires more surgeons but with fewer elective operating sessions and this has an impact with regard to sustainable workforce planning.

The workload and commitments of SAS surgeons need to be reviewed given the clear differences between SAS surgeons and their consultant colleagues.

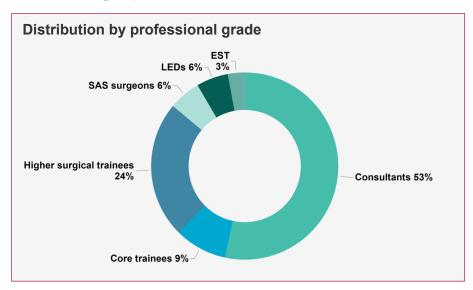
It may be that there is no need to increase the total number of paediatric surgery consultants if the emphasis is instead on working differently, without working beyond contractual obligations.

Colleagues working in adult surgery are less likely to take on general paediatric surgery cases in district general hospitals so future planning will need to take this into account. It is possible that more surgeons will have jobs that include district general hospital work in future (either as part of their job plan or completely).

7. Plastic and reconstructive surgery

There were 309 responses from members of the surgical team who declared plastic and reconstructive surgery as their specialty.

7.1 Demographics

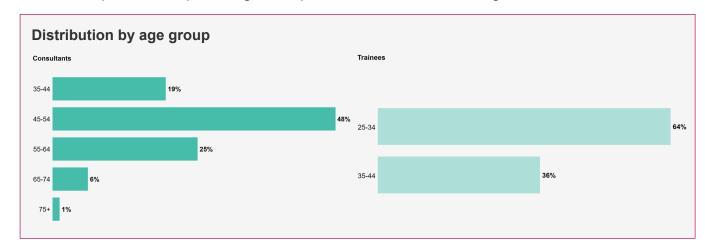


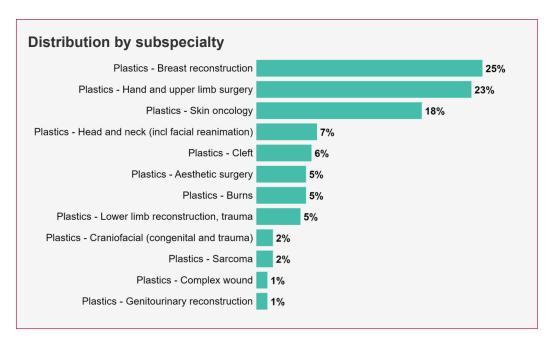
There were 165 responses from consultants and 101 from surgeons in training.

57% of the respondents were male and 43% were female.

Consultants: 61% male, 38% female Trainees: 53% male, 47% female

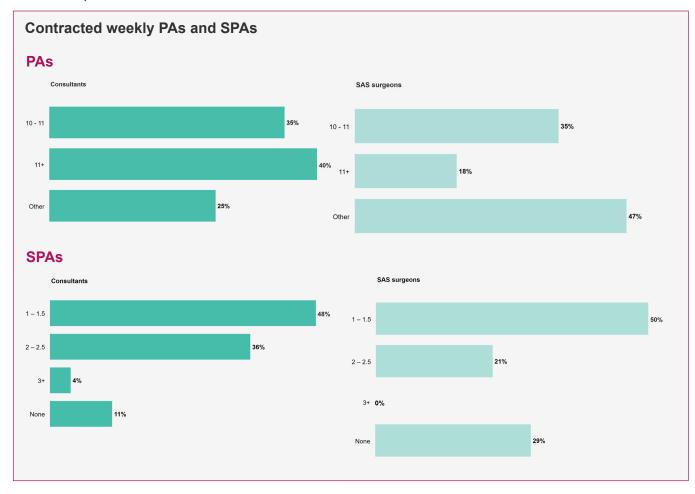
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

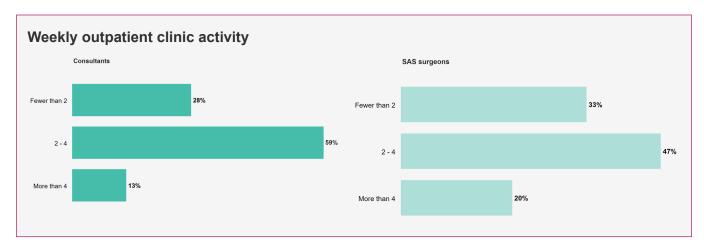


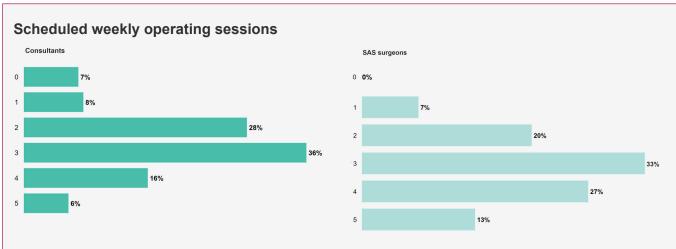


7.2 Job plans and activity

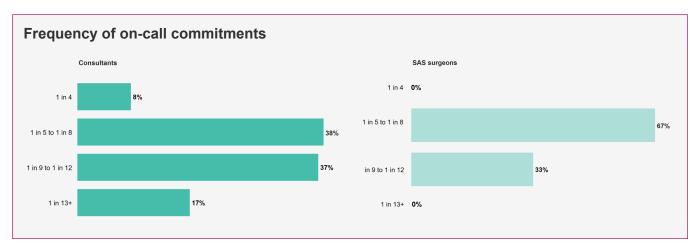
88% of respondents work full time while 12% work LTFT.







77% of consultants and 20% of SAS surgeons have an on-call commitment. 67% of SAS surgeons are resident when on call.



7.3 Recruitment and retirement

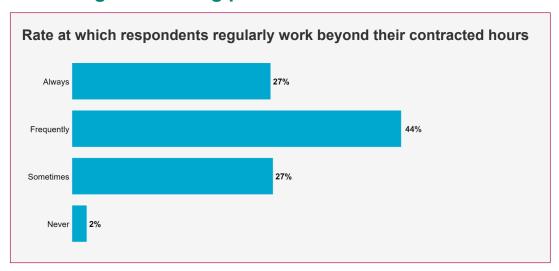
There are no particular issues with recruitment. Trainees tend to be older than in other specialties as many delay entry to plastic surgery training.

43% of surgeons in training are women. 14% of these work LTFT.

25% of consultants plan to retire over the next four years.

In Wales, plastic and reconstructive surgery services are located in Swansea (South Wales). There is no service in North Wales. Instead, patients are referred to Liverpool, where trainees rotate.

7.4 Change in working practices



Most surgeons in plastic surgery have two subspecialties.

Access to the operating theatre is a problem; although units have grown in size, with increased numbers of consultants, there has been no increase in theatre infrastructure.

Consultants tend to have one day of operating (two sessions) per week as well as an additional day-case list.

There are flexible approaches to theatre use, including:

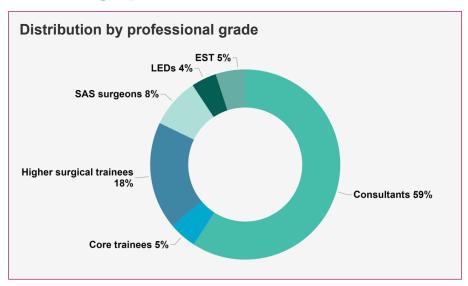
- dual operating
 - This increases efficiency and support for new consultants.
 - Lengthy procedures can be more effectively managed with two surgeons.
- · use of annual leave vacancies
- use of annualised contracts 40 weeks per year

The main spread of on-call commitments for consultants and SAS surgeons is for 1:5 to 1:8 and 1:9 to 1:12. There tends to be a full week on call with shift working but most surgeons still have elective commitments when on call. Many have dedicated trauma lists. Surgeons in training are normally on call with their consultant. There is variable seniority of SAS surgeons, who tend to have an elective practice rather than participating in the on-call rota.

8. Trauma and orthopaedic surgery

There were 1,566 responses from members of the surgical team who declared trauma and orthopaedic surgery as their specialty.

8.1 Demographics

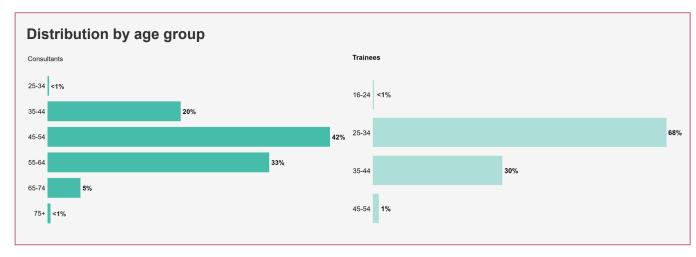


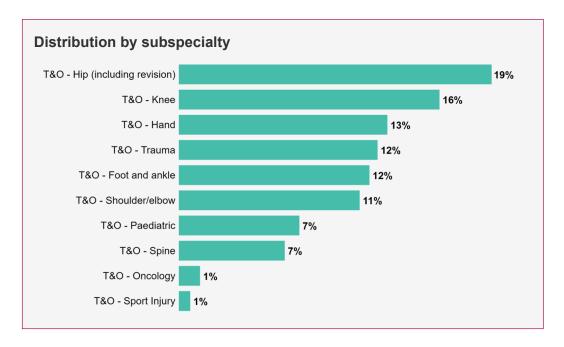
There were 926 responses from consultants and 361 from surgeons in training.

77% of the respondents were male and 23% were female.

Consultants: 82% male, 18% female Trainees: 67% male, 32% female

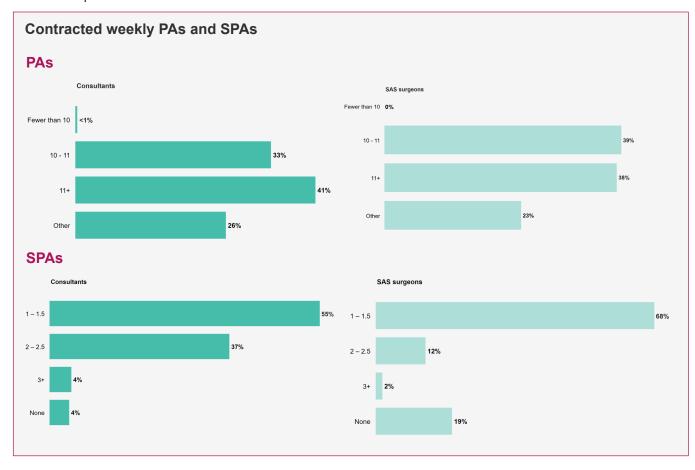
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

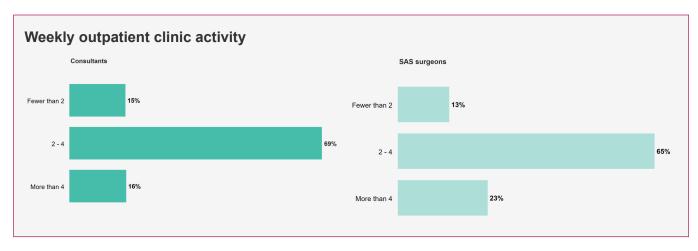


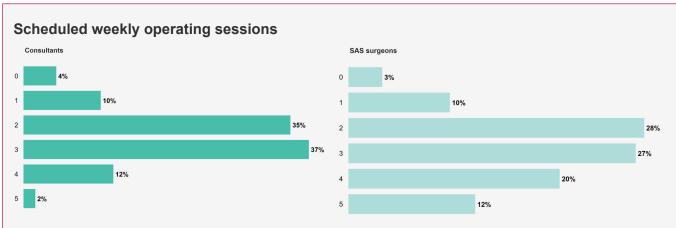


8.2 Job plans and activity

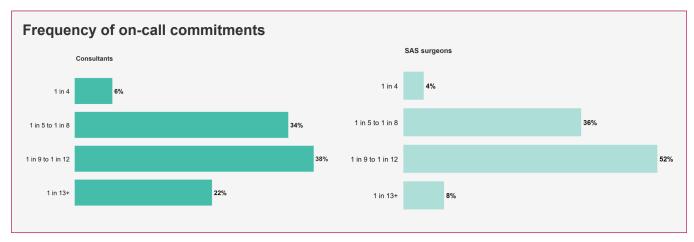
86% of respondents work full time while 14% work LTFT.







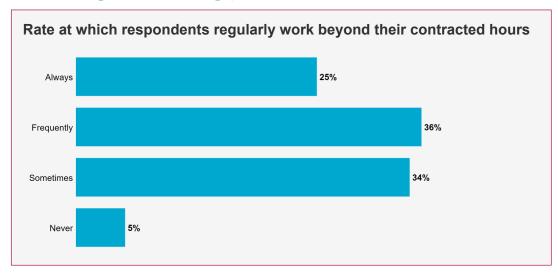
68% of consultants and 78% of SAS surgeons have an on-call commitment. 45% of SAS surgeons are resident when on call.



8.3 Recruitment and retirement

There appears to be a net loss in staffing levels in trauma and orthopaedic surgery, with more leaving the specialty than entering training. 32% of consultants plan to retire over the next four years.

8.4 Change in working practices



The number of scheduled operating sessions is generally higher than for those in other specialties, with 37% of trauma and orthopaedic consultants having three sessions per week.

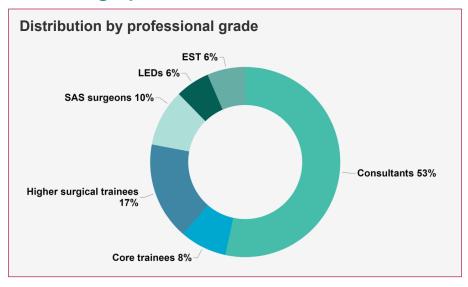
64% are free from elective work when on call, reflecting trauma weeks, which mostly occur every 6–8 weeks. The trend is for more consultant operating with other members of the workforce attending outpatient clinics.

The rise in revision arthroplasty has increased dual-consultant operating, largely reflecting experienced surgeons mentoring less experienced colleagues.

9. Urology

There were 463 responses from members of the surgical team who declared urology as their specialty.

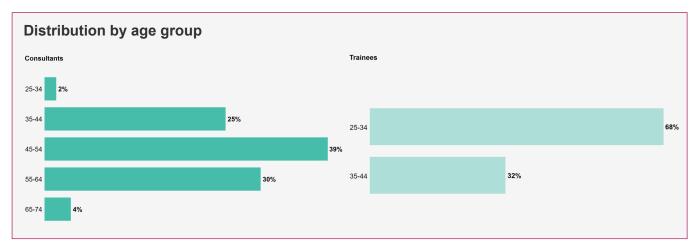
9.1 Demographics

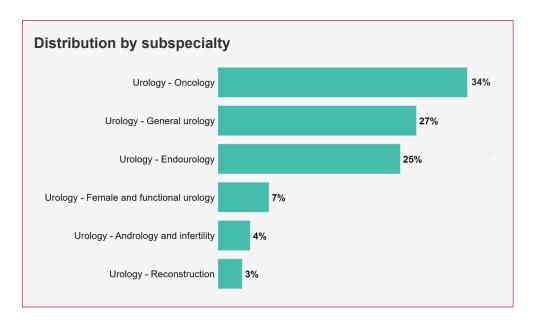


There were 247 responses from consultants and 114 from surgeons in training.

64% of the respondents were male and 36% were female.

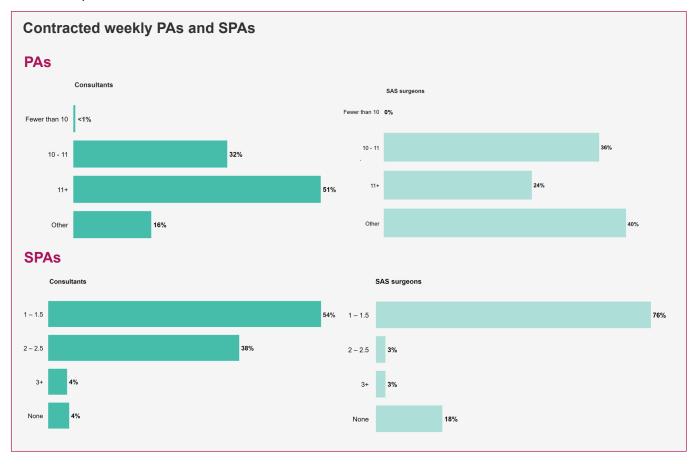
Consultants: 70% male, 30% female Trainees: 59% male, 41% female

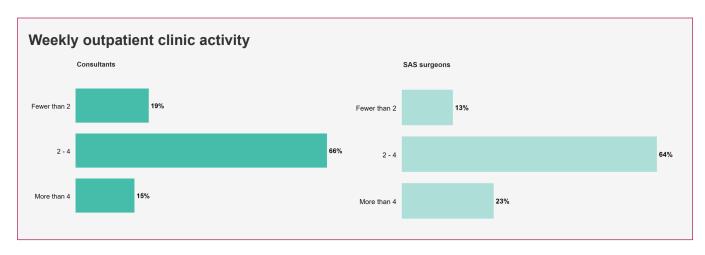


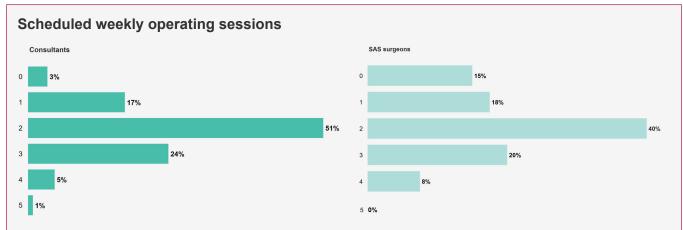


9.2 Job plans and activity

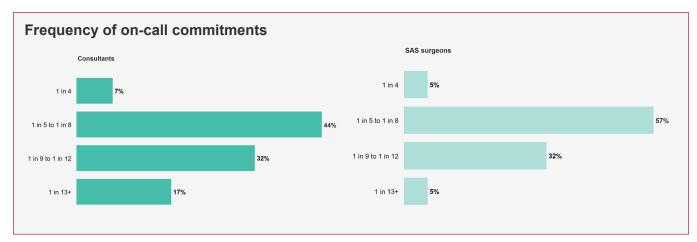
88% of respondents work full time while 12% work LTFT.







83% of consultants and 93% of SAS surgeons have an on-call commitment. 34% of SAS surgeons are resident when on call.



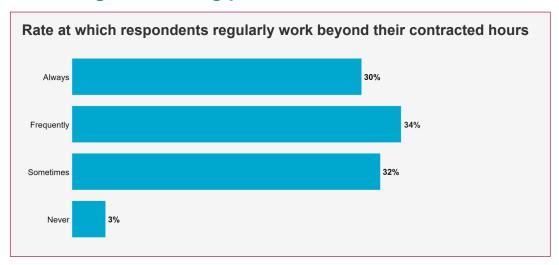
9.3 Recruitment and retirement

Urology is a popular choice, with increasing numbers of applicants.

There are more female trainees so it is likely we will see an increase in the proportion of female consultants.

27% of consultants plan to retire over the next four years. An increasing number are opting for 'retire and return'. This means they will no longer be staffing emergency rotas and this is likely to increase as the time to state pension increases (but only as long as the lifetime allowance continues not to be capped).

9.4 Change in working practices



The non-operative workload has increased and as a result, there has been a reduction in elective activity. This has been particularly evident in surgery for benign urological conditions.

There has been a change to inpatient operations with some moving to day cases and a subsequent shift of some day cases moving to outpatient procedures (e.g. flexible cystoscopy).

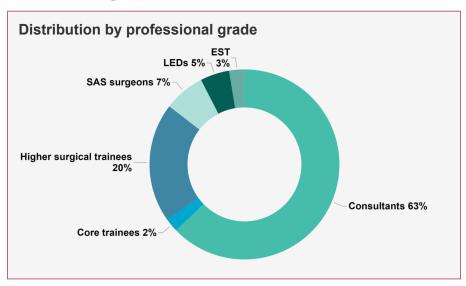
Urology has seen a change in consultant practice as the higher complexity of non-elective admissions requires a more consultant-led service. This may demand reconsideration of a consultant's job content/job plan to reflect this shift in activity.

There have been changes in service distribution with significant centralisation; local units are being integrated with larger institutions utilising a hub and spoke model. This has resulted in a limited elective practice in smaller units, which may prove a less popular option for new consultants.

10. Vascular surgery

There were 344 responses from members of the surgical team who declared vascular surgery as their specialty.

10.1 Demographics

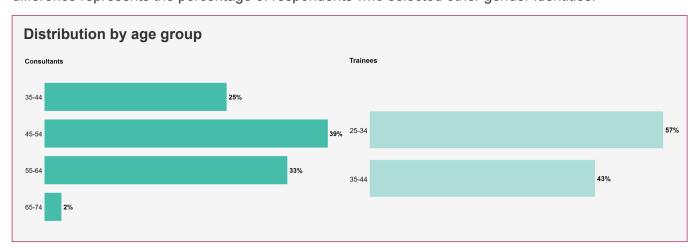


There were 216 responses from consultants and 78 from surgeons in training.

72% of the respondents were male and 27% were female.

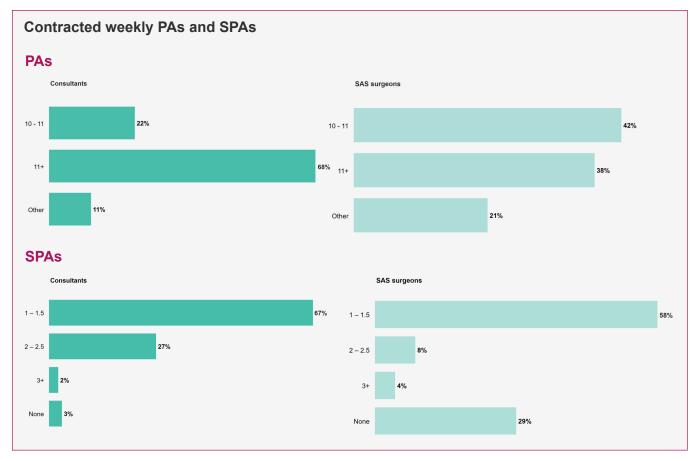
Consultants: 79% male, 21% female Trainees: 68% male, 32% female

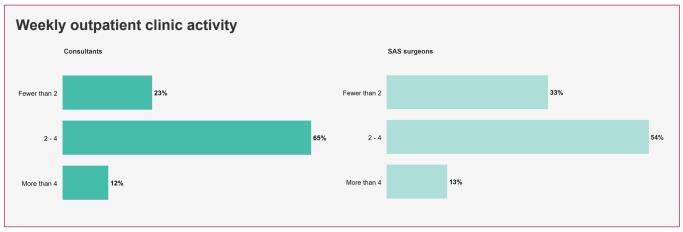
Note: Where the sum of the respective "male" and "female" responses is less than 100%, the difference represents the percentage of respondents who selected other gender identities.

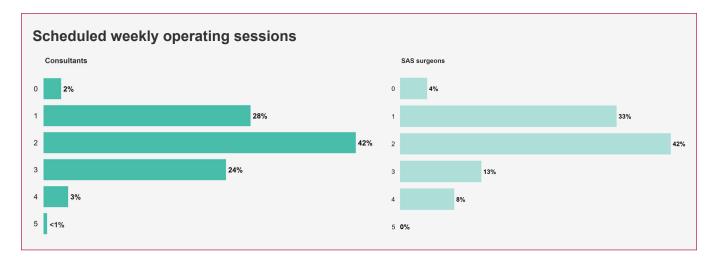


10.2 Job plans and activity

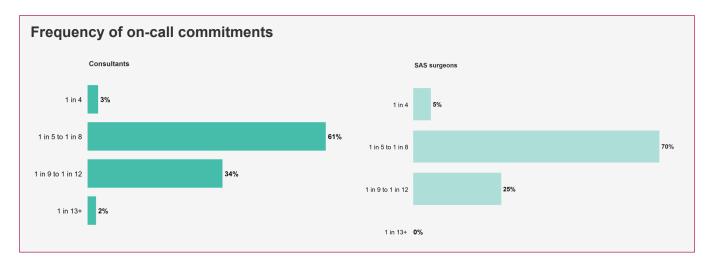
94% of respondents work full time while 6% work LTFT.







87% of consultants and 83% of SAS surgeons have an on-call commitment. 30% of SAS surgeons are resident when on call.



10.3 Recruitment and retirement

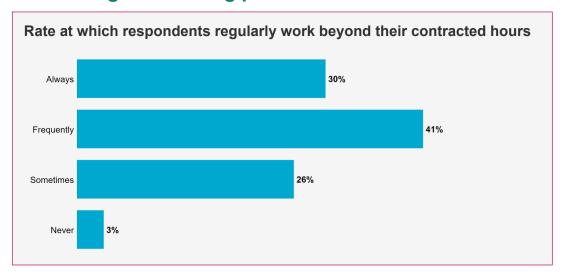
The number of current vascular trainees is expected to affect the provision of consultants as there are insufficient numbers to meet the progression of the consultant workforce and many units have limited trainee support.

The service is supported in many units by visiting fellows, often from overseas.

The urgent nature of the specialty has an impact on vascular trainees gaining competences and experience because of working hour regulations.

30% of vascular consultants plan to retire over the next four years but the consultant workforce in vascular surgery is already generally younger than in other specialties.

10.4 Change in working practices



Present day vascular surgery is an urgent specialty managing patients with critical limb-threatening ischaemia, diabetic foot sepsis, symptomatic carotid disease and aortic aneurysms. Elective practice is limited and difficult to schedule appropriately with the competing urgent workload. Endovascular practice has increased for aortic aneurysm repair and peripheral arterial disease. A reduction in open aortic surgery has resulted in a decrease in the available experience for early-years consultants, who are not getting the opportunities to develop their clinical practice and need support/mentorship from their more senior colleagues. Smaller centres are experiencing pressures on elective practice resulting from the high emergency workload.

There is also a significant volume of 'new' work in vascular surgery in terms of supporting elective cases in other specialties, such as anterior spinal surgery, and complex colorectal and gynaecological cancer resections when there is blood vessel involvement. This reflects increased subspecialisation for all, and highlights the need to design rotas both for internal cover and spoke cover.

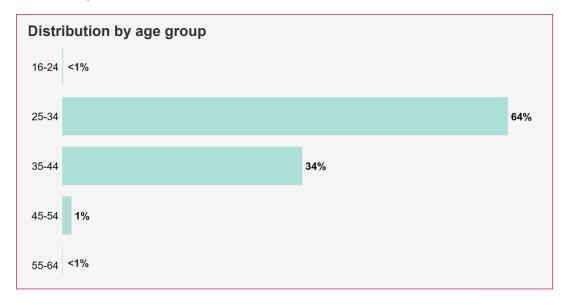
There is an increasing workload from primary care as a result of late-stage presentation of diabetic vasculopathy, ischaemic limbs and leg ulceration.

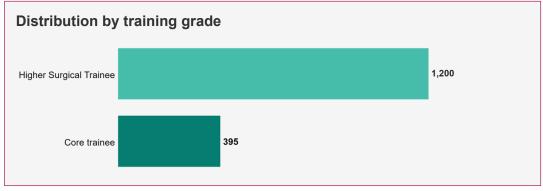
Appendix 6: Surgeons in training

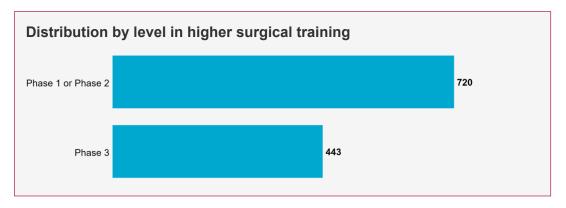
There were 1,595 responses from surgical trainees, which represents 25% of the total responses.

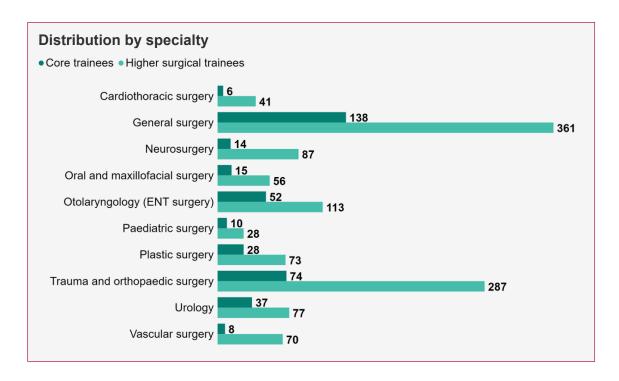
Demographics

58% of respondents were male and 42% were female.



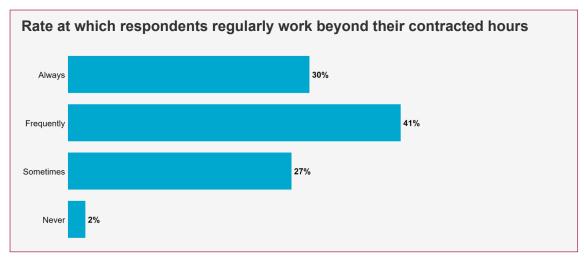


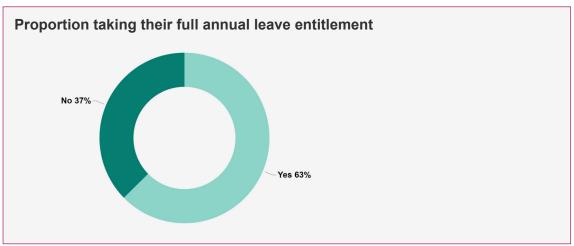




Job plans and activity

91% of respondents work full time while 9% work LTFT.



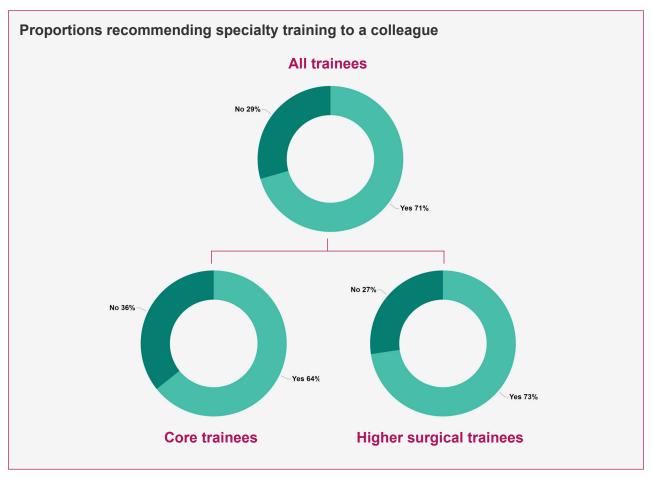


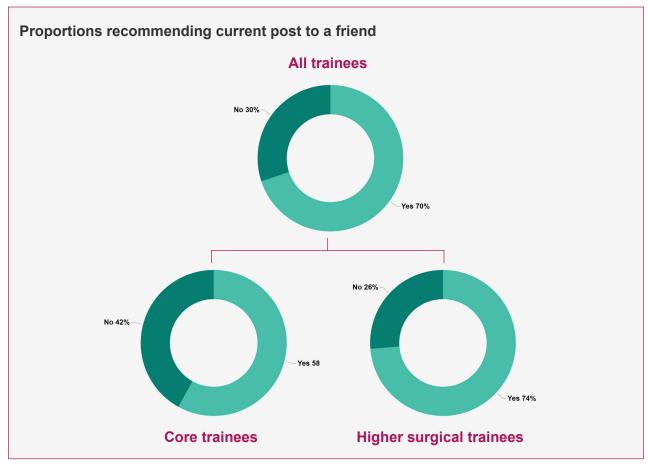
Wellbeing

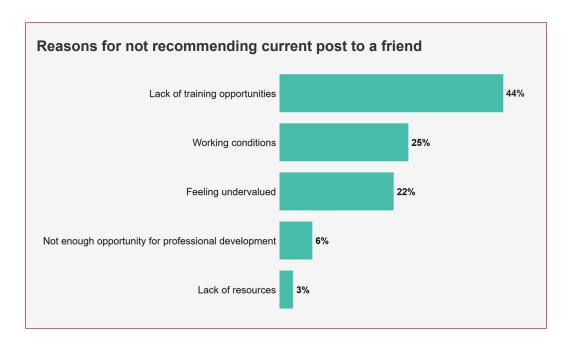


Top 10 reasons for considering leaving training (*n*=1,595)

Category	Count
Burnout	253
Working conditions	201
Cost of training	156
Length of training	153
Pressure due to staff shortages	123
To change to another profession	88
To move overseas to train	84
Pressure due to lack of resources	81
Pay	56
Caring responsibilities	46







Main challenges

- Overall, there is less satisfaction among core surgical trainees than among higher surgical trainees.
- There is limited access to the operating theatre/training, which includes:
 - · inefficiencies in theatre turnaround times;
 - · trainers' availability to train;
 - · availability of local teaching sessions;
 - list cancellations due to staff shortages leading to loss of training opportunities.
- Trainees are frustrated by or experience less focus on training because of the emphasis on service delivery.
- There needs to be improved course funding and a streamlined process for access to courses.
 - There are complaints/issues around trainees having to pay for courses themselves in advance and it then taking months for the fees to be reimbursed.
 - Some courses are not covered in the study leave budget.
- Clear job plans need to be developed for surgeons in training, with better rota management, including:
 - dedicated training and teaching time;
 - an appropriate number of staff on the rota.
- Trainees' exposure to training opportunities is being affected by the need to train other professional groups; there should be priority for trainees in national training programmes.

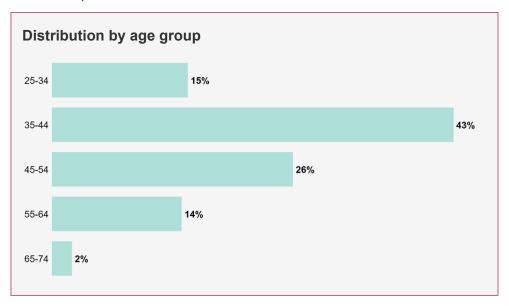
Appendix 7: SAS surgeons and LEDs

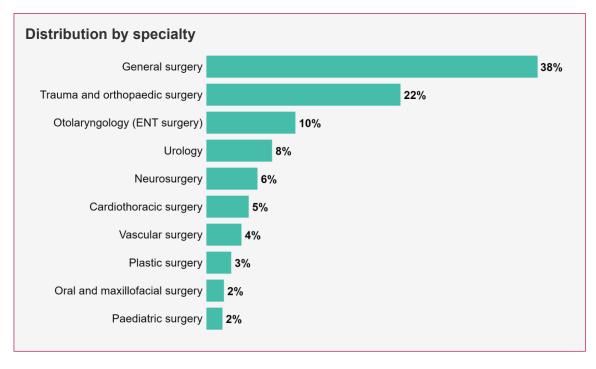
SAS surgeons

There were 608 responses from SAS surgeons, which represents 10% of the total responses.

Demographics

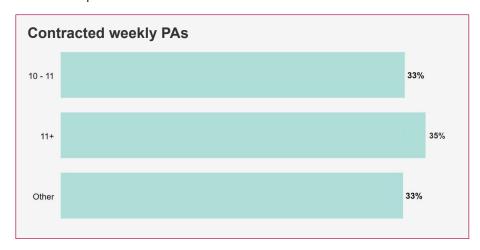
72% of respondents were male and 28% were female.

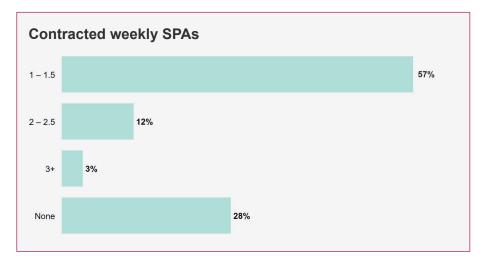


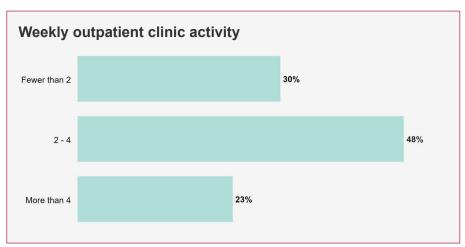


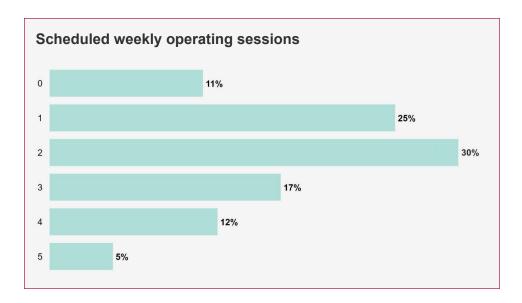
Job plans and activity

92% of respondents work full time while 8% work LTFT.

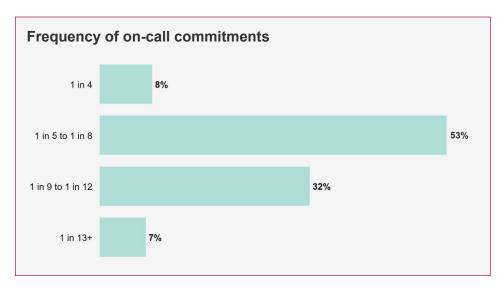




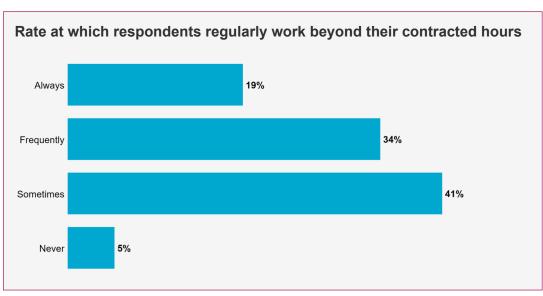




74% of SAS surgeons have an on-call commitment, with 53% being resident when on call. 31% have no other commitments when on call.



Change in working practices



Main challenges

SAS surgeons have a higher number of resident on-call commitments, and this affects their job satisfaction and wellbeing.

Although SAS surgeons work differently, this group would still benefit from a net gain in staffing levels.

Among the main challenges, culture and environment (including bullying and harassment) was cited more frequently by SAS surgeons than by other groups. Other main issues cited by SAS surgeons also included training and development opportunities.

Top 10 requirements to improve training opportunities (*n*=608)

Category	Count
Access to theatre/training	159
Mentoring and support from trainers	65
Equitable treatment	47
More structured training/alternative pathways	31
Funding	29
Access to courses/workshops/regional and national conferences	27
Allocated time to train	25
Clear job plan and better rota management	20
Time for SPAs	19
More elective work	18

As evident from the responses to the census from SAS surgeons and also highlighted in the SAS strategy of the Royal College of Surgeons of England,¹⁴ the sustainability of the surgical workforce could be improved with better integration of SAS grades in surgical teams. This could involve:

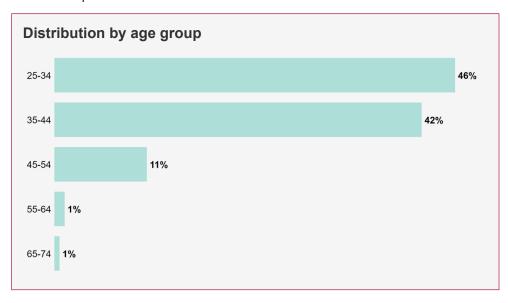
- inclusion in departmental activities such as training days and service development discussions;
- creation of a culture at team level that is inclusive and free from fear, and that supports team member development;
- senior SAS surgeons becoming part of the senior leadership team in the department, and the NHS trust/health board moving away from consultant-only meetings and teams;
- the introduction of SAS advocates across all NHS trusts/health boards;
- a focus on mentorship, supporting high-achieving SAS surgeons to be role models and mentors for less experienced SAS doctors;
- recognition of SAS surgeons as trainers and educators for core and specialty trainees;
- equity in the job planning process, with adequate patient administration and SPA time;
- flexibility to move away from on-call commitments at the later career stages;
- structured training for early-years SAS doctors with an allocation of senior SAS surgeons/ consultants as educational/clinical supervisors, thereby facilitating education and career progression for SAS doctors towards the specialist SAS doctor role;
- clinical coding in the SAS surgeon's name to facilitate recognition of their clinical competences and working patterns;
- those working at a senior level and independently receiving recognition for their autonomous work;
- introduction of a formal mechanism to recognise excellence in departments and NHS trusts/ health boards.

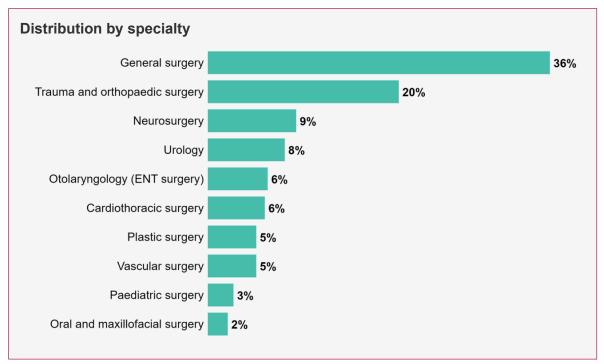
LEDs

There were 342 responses from LEDs, which represents 10% of the total responses.

Demographics

64% of respondents were male and 36% were female.

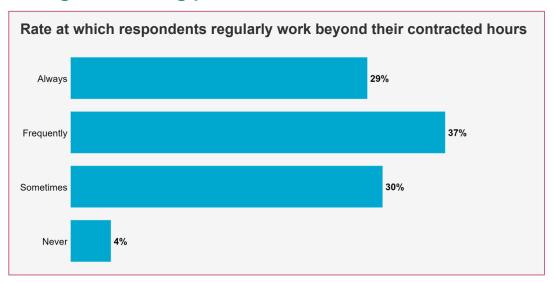




Job plans and activity

95% of respondents work full time while 5% work LTFT.

Change in working practices



Top 10 requirements to improve training opportunities (*n*=342)

Category	Count
Access to theatre/training	97
Mentoring and support from trainers	53
Equitable treatment	34
Funding and access to courses	26
More structured training/alternative pathways	22
Allocated time to train	19
More training posts	18
Fewer barriers to joining core and higher surgical training	14
More staff	13
Fewer on-call sessions	11

Main challenges

LEDs have a different contract with no national terms and conditions. As such, this group is more vulnerable to issues relating to pay progression, and access to study leave and a study leave budget unless these have been agreed locally. This can lead to a disparity of opportunities around development as well as of terms and conditions between one trust and another.

Training and development opportunities featured highly among the issues raised by LED respondents in the census. As noted with SAS surgeons in the section above, better integration of LEDs into teams would help improve the sustainability of the whole workforce. The SAS strategy of the Royal College of Surgeons of England underlines the importance of the retention of LEDs, which is why our aims include the introduction of a workstream specific to this group that will address the challenges they face. This is particularly important given the high attrition rate for both SAS doctors and LEDs, with over half (53%) of those who began work as a SAS or LED in 2013 having left by 2021.¹⁷

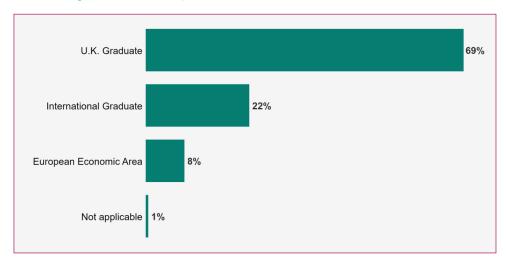
Departments and clinical teams should be encouraged to support LEDs who have been in post for two years in pursuing SAS posts.

Appendix 8: Additional demographic information

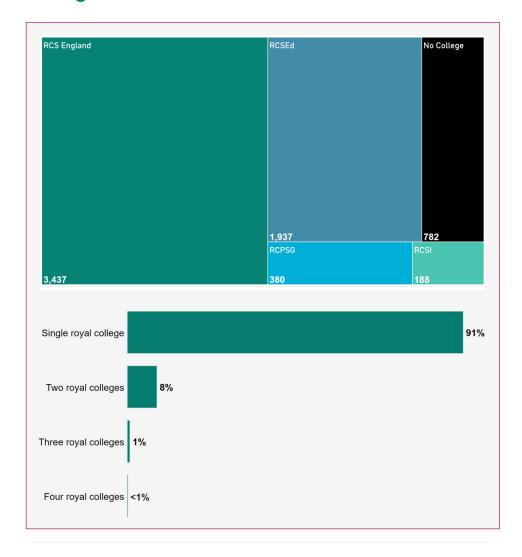
Ethnicity

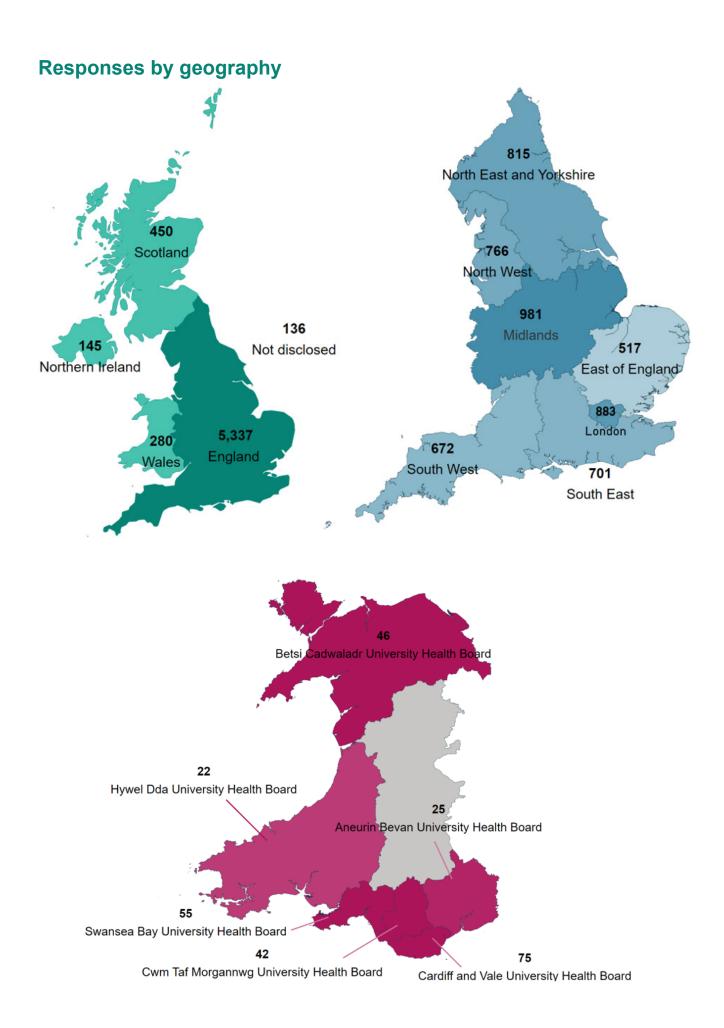
Ethnic group	%
Arab	5%
Asian or Asian British - Bangladeshi	1%
Asian or Asian British - Chinese	3%
Asian or Asian British - Indian	15%
Asian or Asian British - Other Asian background	3%
Asian or Asian British - Pakistani	4%
Black or Black British - African	3%
Black or Black British - Caribbean	<1%
Black or Black British - Other Black background	<1%
Mixed - Other mixed background	1%
Mixed - White and Asian	1%
Mixed - White and Black African	<1%
Mixed - White and Black Caribbean	<1%
White - British, English, Welsh, Scottish, Northern Irish	48%
White - Gypsy or Irish Traveller	<1%
White - Irish	2%
White - Other White background	12%
Other	1%

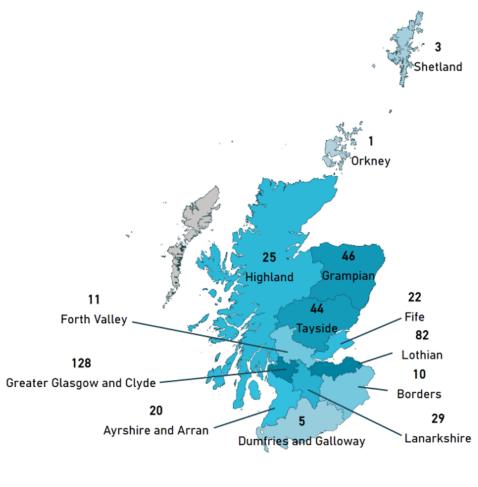
Primary medical qualification

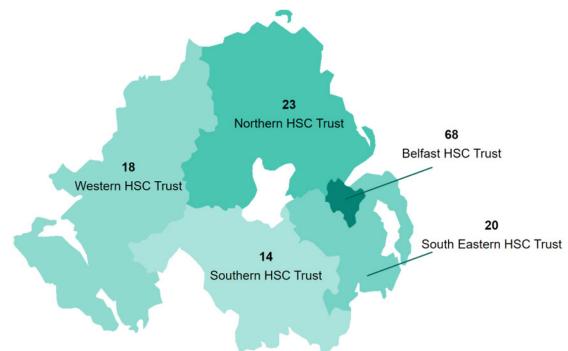


College affiliation









References

- Royal College of Surgeons of England. Surgical Workforce 2010. London: RCS England; 2011. Available at: https://www.rcseng.ac.uk/standards-and-research/standards-and-guidance/service-standards/workforce/ (cited December 2023).
- Royal College of Surgeons of England. Surgical Workforce 2011. London: RCS England; 2012. Available at: https://www.rcseng.ac.uk/standards-and-research/ standards-and-guidance/servicestandards/workforce/ (cited December 2023).
- NHS England. NHS Long Term Workforce Plan. Leeds: NHS England; 2023. Available at: https://www.england. nhs.uk/publication/nhs-long-termworkforce-plan (cited December 2023).
- Scottish Government. National Workforce Strategy for Health and Social Care in Scotland. Edinburgh: Scottish Government; 2022. Available at: https:// www.gov.scot/publications/nationalworkforce-strategy-health-social-care/ (cited December 2023).
- Welsh Government. National Workforce Implementation Plan: Addressing NHS Wales Workforce Challenges. Cardiff: Welsh Government; 2023. Available at: https://www.gov.wales/nationalworkforce-implementation-plan (cited December 2023).
- Department of Health. Health and social care workforce strategy 2026. https:// www.health-ni.gov.uk/publications/ health-and-social-care-workforcestrategy-2026 (cited December 2023).

- 7. Office for National Statistics. Public service productivity, healthcare, England: financial year ending 2021. https://www.ons.gov.uk/economy/economicoutputandproductivity/publicservicesproductivity/articles/publicservicesproductivityestimates healthcare/financialyearending2021 (cited December 2023).
- 8. Data supplied by NHS England in September 2023.
- Organisation for Economic Co-operation and Development. Health at a Glance 2023. Paris: OECD; 2023. Available at: https://doi.org/10.1787/7a7afb35-en (cited December 2023).
- Health Foundation. Longer hospital stays and fewer admissions. https:// www.health.org.uk/publications/longreads/longer-hospital-stays-and-feweradmissions (cited December 2023).
- Royal College of Surgeons of England.
 The Case for Surgical Hubs. London:
 RCS England; 2022. Available at:
 https://www.rcseng.ac.uk/about-the-rcs/
 government-relations-and-consultation/
 position-statements-and-reports/the case-for-surgical-hubs (cited December 2023).
- 12. Royal College of Surgeons of England. The Royal College – Our Professional Home. London: RCS England; 2021. Available at: https://diversity.rcseng. ac.uk/how-we-got-here (cited December 2023).
- 13. Royal College of Surgeons of England. Parents in Surgery: The Start of a Conversation. London: RCS England; 2022. Available at: https://diversity. rcseng.ac.uk/how-we-are-changing/ parents-in-surgery (cited December 2023).

- 14. Royal College of Surgeons of England. SAS Strategy: Unlocking the Potential, 2023–2026. London: RCS England; 2023. Available at: https://diversity.rcseng.ac.uk/how-we-are-changing/sasstrategy (cited December 2023).
- 15. Royal College of Surgeons of England. Future of Surgery. London: RCS England; 2018. https://futureofsurgery. rcseng.ac.uk/report-2018 (cited December 2023).
- 16. McNally S, Huber J. Developing a 'Doctors' Assistant' role to ease pressure on doctors and improve patient flow in acute NHS hospitals. BMJ Leader 2021; 5: 62–64.
- 17. General Medical Council. The State of Medical Education and Practice in the UK: The Workforce Report 2022. London: GMC; 2022. Available at: https://www.gmc-uk.org/-/media/documents/workforce-report-2022--full-report_pdf-94540077.pdf (cited December 2023).

